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THE RETROBATES

WHAT'S YOUR FAVOURITE MEGA DRIVE GAME?

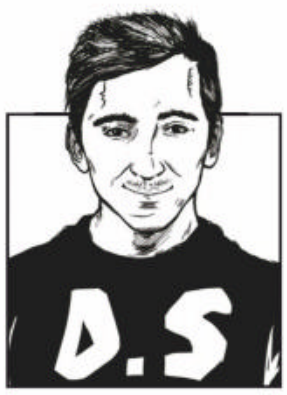
DARRAN JONES

Devil Crash for me. I have been playing it a lot lately and it really is an exceptional pinball game, with a truly phenomenal soundtrack.

Expertise:
Juggling a gorgeous wife, two beautiful girls and an award-winning magazine

Currently playing:
Undertale

Favourite game of all time:
Strider



DREW SLEEP

Rocket Knight Adventures, of course. It was snubbed from the Mega Drive Mini roster! That cut me deep, man…

Expertise:
Campaigning for a matt finish cover (hooray for RG197)

Currently playing:
Cuphead

Favourite game of all time:
Final Fantasy VIII

NICK THORPE

Birds fly, fish swim, Nick extols the virtues of *Sonic*. At this point, you could try to get me to shut up about *Sonic* by stabbing me, and I'd just drop some rings and carry on.

Expertise:
Owning five Master Systems (I sold two)

Currently playing:
Columns

Favourite game of all time:
Sonic The Hedgehog

ANDY SALTER

Since the Mega Drive Mini came into the office I've played *Shining Force* every lunchtime… but that's only because *Rings Of Power* isn't on there.

Expertise:
Modding games, I rarely play a game in it's 'vanilla' form any more

Currently playing:
Kenshi

Favourite game of all time:
Rome: Total War

IAIN LEE

Big fan of *Alex Kidd*, a beautiful little platformer that was stupidly addictive.

Expertise:
Buying overpriced stuff on eBay then never touching it

Currently playing:
Advance Wars

Favourite game of all time:
Elite (BBC Model B)

PAUL DRURY

I really like *Sub-Terrania*, a bit of a hidden gem which feels like the spiritual successor to *Gravitar*.

Expertise:
Midlife crises

Currently playing:
Radar Rat Race

Favourite game of all time:
Sheep In Space

HARETH AL BUSTANI

Dynamite Headdy, as it features some of the most fun action sequences on the platform.

Expertise:
Juggling obscure games, words and guitar and seeing where it all lands

Currently playing:
Mordhau

Favourite game of all time:
The Secret Of Monkey Island

GRAEME MASON

As everyone else is going to say *Streets Of Rage 2* (unless you're Darran) I'll go for *Buck Rogers Countdown To Doomsday* which is a really underrated little RPG.

Expertise:
Adjusting the tape azimuth with a screwdriver

Currently playing:
The Last Of Us

Favourite game of all time:
Resident Evil 4

RORY MILNE

I'll go for *Earthworm Jim*. It looks beautiful and plays beautifully, and its inspired level design is matched only by its inspired lunacy.

Expertise:
The game that I'm writing about at the time of writing

Currently playing:
Get Dexter 2

Favourite game of all time:
Tempest

When I first dipped my toes into the murky waters of import gaming, Sega's Mega Drive was the first machine that I purchased. It introduced me to the joys of 60Hz gaming, getting releases months before the UK, a host of fantastic Japan exclusive shoot-'em-ups and much more besides. As you might have guessed, I'm a big fan of Sega's 16-bit machine.

When the Mega Drive Mini was first announced, my ears immediately pricked up and I kept a close eye on its progress. The quality of mini consoles has jumped up dramatically since Nintendo entered the market with its NES Mini, and past offerings from AtGames had me a little cautious. Before long, Sega not only highlighted the lengths it was going to in order to licence quality games to the system, but also revealed that the emulation masters at M2 were directly involved with the device.

If that name doesn't instantly register with you, its many games certainly will. Over the years it's been involved in the *Sega Ages 2500* range, Sega's *3D Ages* range, as well as scores of Virtual Console releases, the NeoGeo Station and Konami's *Castlevania* and *Contra* anniversary collections. It's a pleasure, then, to cover these custodians of retro in the mag in such detail.

Enjoy the magazine!

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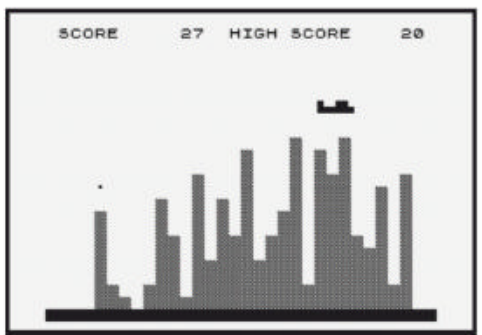

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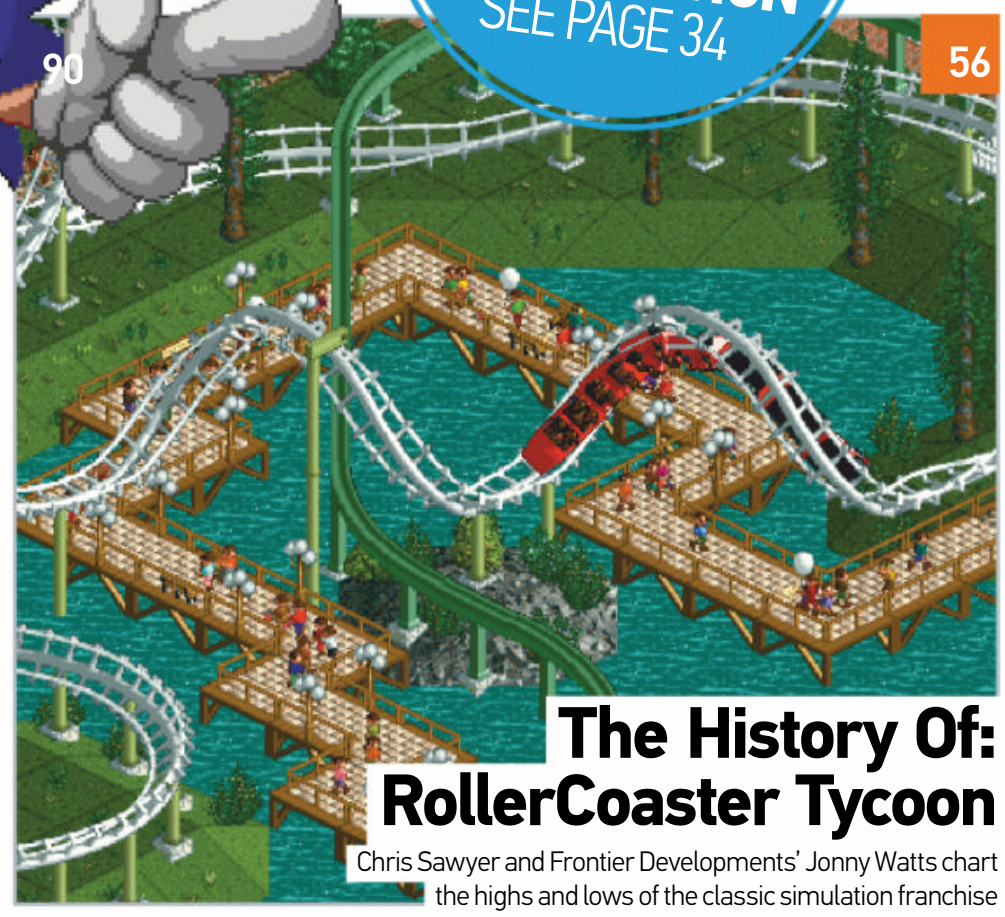

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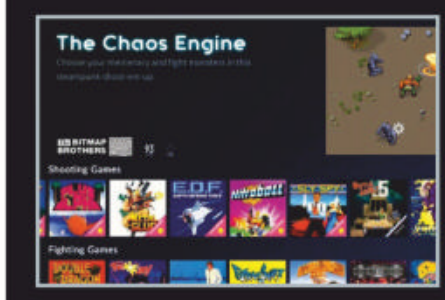

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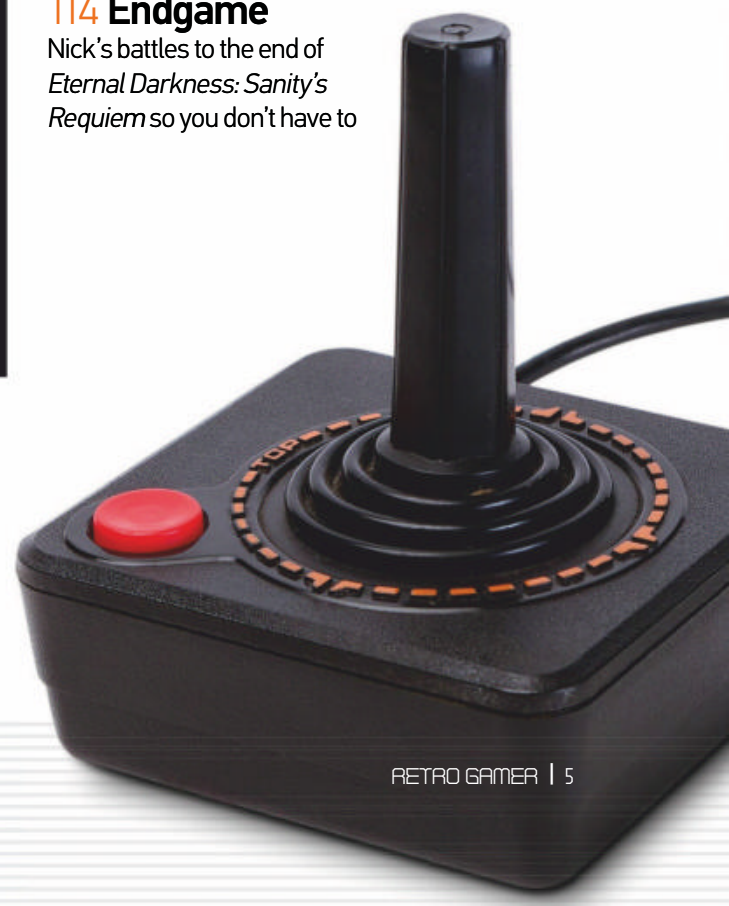

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ARCADE THRILLS FOR YOUR HOME

Koch Media's Ben Jones talks to us about the Capcom Home Arcade

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Nick continues his fantastic voyage and stops off in October 2002

When the Capcom Home Arcade was first announced in April it instantly set the internet ablaze. Some were aghast at the staggeringly high entry point of £200, while others were disappointed with the amount of announced games and the bizarre decision to base the device's design around the Capcom logo. We've now had our hands on an early build of the machine, ahead of its October release, and it has certainly exceeded our expectations. It looks a lot nicer in the flesh and is surprisingly comfortable to use. It's also easy to see what a difference using Sanwa parts makes to the build quality of the stick. It's certainly not cheap, but it feels different, special even, and it's been a labour of love for Koch Media's Ben Jones who has been working as producer on the project.

"We were the manufacturers of the C64 Mini and it was quite a commercial success for everybody involved," he begins. "We thought about who we could approach for licences, looked at all the retro machines that were on the market and that narrowed it down somewhat because a lot were taken." So why choose to make a Capcom-based system, then? "Well the CPS era, everything fits well… the games just play well and they all have that Capcom feel about them," Ben continues. "In my mind the target market I think is quite wide. It's people like me and hopefully they show their children and that's why the two-player thing was important to me because I want to play it with my kids."

The interesting two-player design of the Capcom Home Arcade stick has certainly had plenty of interest since its announcement and many have been asking why the device simply wasn't split into two for ease of use. "It was definitely considered," says Ben, "but in the end this just seemed more commercially viable. It would be a more expensive item as well. It's possible from a technical standpoint but it would cause more issues in manufacture, you'd have to have two moulds, how would they link together? People were saying, 'Why don't you have a magnet?'"

The overall price has certainly been a sticking point for many as, let's face it, the Capcom Home Arcade is a lot more expensive than items like the SNES Mini. Ben feels the higher price is justified, as his team has focused on quality first and foremost (which is admittedly apparent when you play it). "Well, to make the base and to make the tops you have to have steel moulds and they're very expensive," confirms Ben. "Using Sanwa parts rather than generic parts, having a machine that can do 1080p and output at 60Hz, there are all these little advancements

» The Capcom Home Arcade is surprisingly comfy to use. There's also a lot of space for two players.

» [Arcade] A bespoke version of Final Burn is at the heart of the Capcom Home Arcade and the end results are very **impressive.**

» [Arcade] An original version of *AVP* costs over £200 today!

> **"These are valuable intellectual properties and you have to respect that"**
>
> Ben Jones

that we had to make in the quality. In the end it comes to £199. It has to be around that price to make it viable."

Another thing to remember is that every single game is licensed, which instantly starts eating into the available budget. In addition to licensing 15 games directly from Capcom there's the jewel in the crown to consider, *Aliens Vs Predator*, which is a quagmire in itself. "Licensing has its challenges," Ben laughs. "These are valuable intellectual properties and you have to respect that. I've dealt with licences throughout my career at Koch and you just have to go through the process. But in my mind *AVP* had to go on because we had to have a standout title. *Alien Vs Predator* was there from the outset. I'd watched Jim Sterling, Metal Jesus and people like that online and they would bang on about it and they would talk about the licensing difficulties with Fox and I just thought 'it's a must-have' and I'm lucky that I contacted the right people and they liked the machine."

One thing we have noticed is the lack of save states on Koch's system, which is a little disappointing as it's a useful tool to have. "As we played it more and more over the last 18 months high scores became more important for us," explains Ben. "Obviously on a local machine it's important that you beat your own [score], but when you start transferring it to a leaderboard you just can't introduce save states because it doesn't then work with an online leaderboard. Also when we reflected on it most games could be beaten in around an hour max, so the importance of it seemed a bit less. I kind of wanted to give it an arcade feel so that's why it's not there."

Scanline options are also conspicuous in their absence, although there's potentially good news with regards to this surprising omission. "Well at this moment we have original size, full-size screen and widescreen [all pixel perfect] and they all have smoothing options. We will endeavour to add CRT scanlines at the earliest possible moment. It's been something on my list and we may have time to do it before we start flashing the manufacture builds, but at the moment it is what it is."

It's clear to see even at this point that Koch Media's machine isn't being designed to compete with the likes of the SNES and Mega Drive Mini. Instead it's a high-end premium product with a price tag to match. Expect to see a review in the magazine in the near future. *

» We had a few exciting bouts on *Street Fighter* – don't let Darran pick E Honda!

GIRL POWER

Fans of the *River City* games will be pleased to hear that a latest offering in the series should be available as you read these words. *River City Girls* is due for release on all existing systems and follows the adventures of Kyoko and Misako as they fight their way through the six varied regions of River City in search of their boyfriends, Kunio and Riki. If those names sound familiar, it's because their beaus are the usual stars of the franchise, meaning the two friends are going to have quite a fight on their hands.

Luckily, both Kyoko and Misako have plenty of individual moves at their disposal, and will still have the option to buy food and gear to upgrade their existing abilities. As you'd expect from a game by WayForward Technologies, the visuals and animation look absolutely top-notch and there's a suitably upbeat soundtrack, too. A physical release from Limited Run Games for Switch and PS4 are available to order now, but only for a short period of time, so be quick. Look out for a review soon.

FIGHTING FRENZY

A FLURRY OF FIGHTERS WERE ANNOUNCED AT EVO 2019

You can always expect some solid announcements to come off the back of the annual Evolution Championship Series, but this year's reveals have been particularly good. The recently released *Samurai Shodown* got off to a fantastic start by revealing a bunch of new characters that will be dropping monthly for the rest of 2019. Rimururu will be available by the time you read this, Shizumaru Hisame will drop in September, Basara in October, Kazuki Kazama in November, while Wan-Fu will arrive in December. SNK also revealed to the roaring crowd that *The King Of Fighters XV* was in development. Fans were treated to nothing more than a stylish logo reveal, but that didn't seem to matter to the ecstatic congregation. The other new fighting game announced at Evo was the latest *Guilty Gear* release, which will arrive sometime in 2020. Arc System Works didn't reveal too much in way of gameplay mechanics, but it was still more than what SNK shared and was met by rapturous applause from the crowd.

» We're looking forward to some Mitsurugi-Haohmaru clashes in *Soulcalibur VI*.

> **"DLC characters were very much in vogue"**

DLC characters were very much in vogue with the rest of the fighting community, with several other companies eager to show off new characters that would be available for their respective games by the year's end. Capcom created some of the biggest noise with reveals of E Honda, Lucia and Poison for the latest season of *Street Fighter V*. The arrival of E Honda means all of the original eight fighters from *Street Fighter II* are now present and correct, while Poison appears to have picked up plenty of moves since appearing in *Street Fighter IV*. Lucia is the biggest surprise as she's a playable character from *Final Fight 3* and has never appeared in a *Street Fighter* game before – she seemed more than capable of holding her own, mind.

» [PS4] Lucia was last seen as a playable character in *Final Fight 3*.

Namco announced that *Soulcalibur VI* would receive a second season pass and that *Samurai Shodown*'s Haohmaru would be appearing as a guest character. It also revealed that Cassandra would be added to the main roster. Other Namco surprises included a second *Dragon Ball FighterZ* pass that will be adding Janemba, Gogeta and Broly, and the reveal of Leroy Smith, a brand-new character for *Tekken 7*, who was announced alongside Za-Fina, who was first seen in *Tekken 6*. Phew!

NEXT-GEN NEO-GEO

SNK REVEALS A NEW PROJECT

SNK has certainly been busy lately. In addition to reviving the *Samurai Shodown* series, announcing a new *King Of Fighters*, releasing a 40th anniversary collection and working on countless updates of its Neo-Geo Mini, it's now announced another Neo-Geo related project.

"A next-gen Neo-Geo hardware is coming after the Neo-Geo Mini," the official tweet begins. "With a modern design and a wonderful play feeling you can even link it to Neo-Geo Mini. The new hardware will provide you a Neo-Geo journey that you have never experienced." Needless to say the cryptic tweet could refer to just about anything, but it's highly unlikely that the company is making a full return to the hardware market like some hopeful fans have suggested. Our best guess is that SNK is producing a high-end compilation device similar to the Capcom Home Arcade stick, but ultimately, we're just going to have to wait and see.

PUT A PAUSE IN YOUR DAY

With so many demands from work, home and family, there never seem to be enough hours in the day for you. Why not press pause once in a while, curl up with your favourite magazine and put a little oasis of 'you' in your day.

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Who is Iain Lee?
Iain Lee is a freelance broadcaster who loves gaming, particularly retro gaming. He currently hosts *The Late Night Alternative* show at weekends from 10pm on www.talkradio.co.uk and runs daily retro streams on www.twitch.tv/iainlee.

A very touchy subject

I had very limited experience with the Mega Drive when I was young. The only time I got to play on it, that I can remember, was when I was about 16 or 17 years old. After a night out on the old razz (just fizzy pop for me, honest!) a group of us would end up at Pepsi Cola Khan's house and a lengthy session of *Sonic The Hedgehog* would typically take place. I was absolutely awful at it, and I still am today, but what a thrill! Serious question: is there anyone out there who doesn't like the first *Sonic* game? I guess there must be, in the same way some poor individuals don't like The Beatles, and I can only pray for you.

Can I let you into a secret about those Mega Drive nights? This will probably make me sound like an absolute pervert, and I feel a little ashamed, but I used to get a real kick out of touching the console. It was just such a sexy piece of plastic that I had to get tactile with it. A lot of my pleasure as a youth came from, well, touching things. I remember a particularly arousing door handle we had at home and I became fixated with stroking it. So much so that my dad eventually ended up changing it. The new one was rubbish.

But Sega's magic machine was just amazing. Firstly the weight. It felt – and as I type this I realise I sound insane – absolutely perfect to lift up. It was deceptively light. An actual joy to hold in the air. Then there was that ribbed bit on the left hand side. This was easily my favourite part to stroke. Yes, I actually stroked it. Sometimes I would pull my nails down it to get that noise.

Look, if you're going to sneer, I'll stop. Calmed down? Good. Then I'll continue.

The volume control was just pure pleasure. Naughty, dirty little thing. And the defiant click of the on/off switch was only bettered by the soft release of the reset button. Great action.

Here's the thing I've learnt as I've got older. If something 'works' for me, then I can't be the only one who feels that way. There has to be at least one other person reading this who feels the same, who believes that consoles and old computers are more than just the games they play and the way they look when they're sat on your desk. The way they feel is equally important (another case in point, the slightly nobbly feel of the main body of a BBC Micro).

I don't go around touching up old gear so much any more. My objectophilia is under control. And I've probably made myself sound worse than I actually am. I never got caught doing it as a teenager, I was discreet. It was normally as a cartridge was being changed because someone wanted to play *Ecco*, a game I never really 'got'. If I was lucky, I'd get to switch off the Mega Drive and pack it away. Ah, the simple pleasures. Seriously, the PS4 and Xbox One just really don't do it for me (although, don't get me started on the Xbox 360 on/off button). ✱

> "I used to get a real kick out of touching the console"

Do you agree with Iain's thoughts? Contact us at:

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Who is Paul Rose?
Paul is probably better known as Mr Biffo – the creator of legendary teletext games magazine *Digitiser*. These days, he mostly writes his videogame ramblings over at Digitiser2000.com. If you want more Biffo in your eyes, you can catch him as the host of *Digitizer The Show* at www.bit.ly/biffo2000.

Back in my day...

Something that today's modern kids, with their *Fortnites* and their *Minecrafts* and smartphones, take for granted is how easy it is to get games. Not only are half of them free (loot crates and DLC notwithstanding), but if you decide you want to play something, you can have it on your device almost immediately.

I sometimes wonder whether this ease of access, this instant gratification, somehow devalues the games modern kids play.

Back in my ill-spent youth, part of the thrill of getting a new game was the waiting… waiting to save enough pocket money to afford it, travelling to John Menzies or Woolies to buy it, heading back home on the bus as I pored over the cassette inlay, then waiting for it to load… waiting for it to load… waiting for it to load…

I mean, the internet and social media have shot my attention span to shreds. These days I can barely wait for a kettle to boil without shouting at it to hurry up, so how I ever coped back then is a mystery.

That tactile connection to the games, the anticipation (and often, frankly, crushing disappointment at the end product) was half the joy of it. It's why I was never into playing pirated games; the adventure of legitimately owning something, bought with my own money, the effort that went into playing it, gave it a value. I stuck with so many games that I otherwise would've given up on if I'd been able to download them instantly onto my Speccy.

Even more exciting was when I bought something via mail order. Nowadays, you buy something online and you can track it almost to your door. I like ordering a takeaway from Deliveroo, because you can watch your driver's progress on a map, which allows me to gauge whether I have enough time for a pre-dinner wee.

Ordering from the mail order ads in games magazines felt almost illicit. Whether it was a big company like Special Reserve, or some little self-publisher with a grotty hand-drawn, black and white ad in the back of *Your Spectrum*, it always gave me a weird sort of thrill, like I was doing something wrong and naughty.

You never quite knew what you were getting, never quite knew when it would arrive… often you wouldn't even know if it worked. When I buggered up my SNES by being a bit too overzealous with an NTSC-to-PAL convertor (I bent the pins!) I had to send it away to be fixed. I was without it for weeks, I didn't quite know when it would be returned to me… yet when it arrived home, it felt like Christmas.

I honestly miss that time. Don't get me wrong, I don't want to go back to it. I couldn't live without the insta-delivery of Amazon Prime or Netflix, and I haven't bought a physical game for almost a year. But the slower pace of the Eighties taught me that, sometimes, good things come to those who wait. As well as *Kosmik Pirate*.

> "I can barely wait for a kettle to boil without shouting at it"

Do you agree with Paul's thoughts? Contact us at:

RetroGamerUK @RetroGamer_Mag darran.jones@futurenet.com

The future's bright

Ted Sterchi tells us all about his forthcoming indie game Orange Island

Although he's made his career in digital design, with stints at companies such as Sega, Ted Sterchi has always had a keen interest in creating games. This year he decided to focus on his platform adventure *Orange Island*, a game so close to NES specs that it's actually getting a NES version, and has successfully funded it via Kickstarter, where it received over 400 per cent of its funding goal.

How did you get into gaming - what were your first platforms and early favourite games?

My first system was the NES. I'm pretty sure the first game I owned was the two-in-one *Super Mario Bros* and *Duck Hunt* cartridge. Other early obsessions included *California Games*, *Rescue: The Embassy Mission* and *Dragon Warrior*. Also, a whole bunch of *Castlevania* (one through three). I used to draw so much *Castlevania* fan art when I was about seven years old. My first 16-bit console was the Genesis, and I fell hard for the *Sonic* series. *Kid Chameleon*, *Zombies Ate My Neighbours* and *Castlevania: Bloodlines* were also my favourites. I convinced my parents to buy me a SNES where I discovered *Super Metroid*, *Super Castlevania IV* and *Chrono Trigger*. I think the SNES era taught me a lot about ambiance and emotion in games.

> **"They told me that Orange Island had to come to the NES"**
> Ted Sterchi

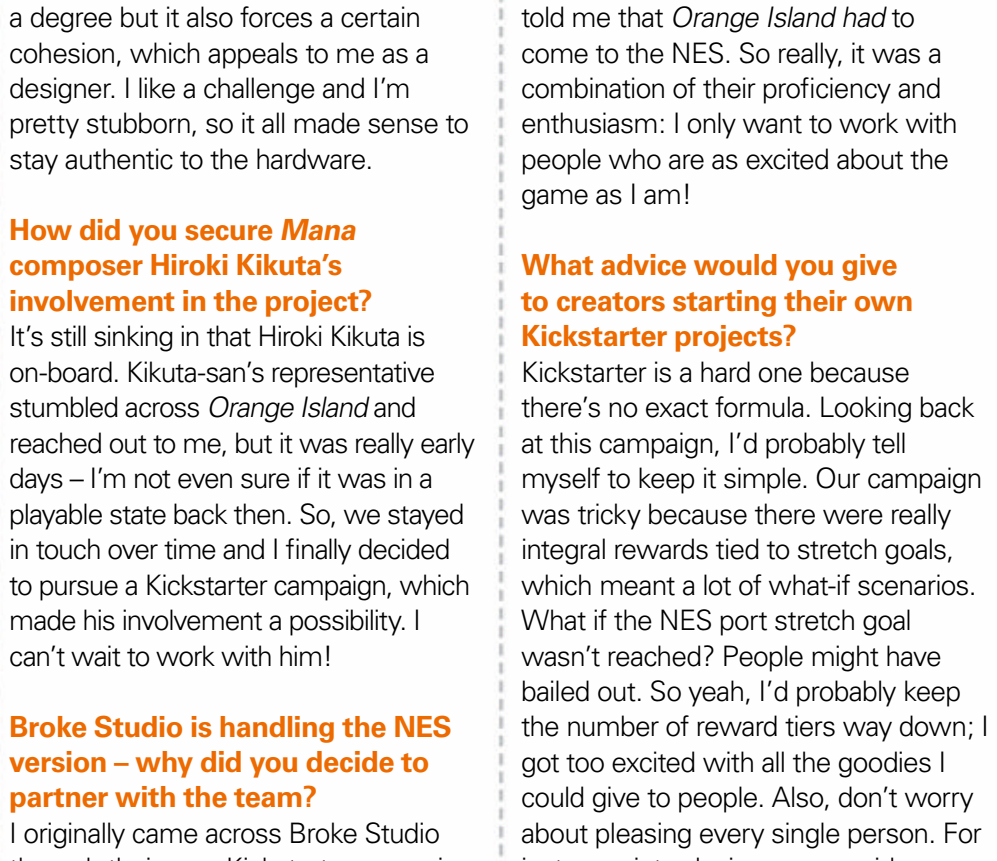
Please give us a summary of *Orange Island* – what happens, and what will players be doing?

Orange Island follows four kids and a grandmother as they explore an island and try to prevent a war between humans and the slimes who have taken residence there. As this is a NES game, I'm leaning in on videogame logic a bit, but I actually want to tell a really poignant story too! Gameplay-wise, it's an exploration-based platformer. There will be puzzles, ability upgrades, side-quests, towns… you could say it's something like *Legacy Of The Wizard* meets *Zelda II* by way of *Castlevania II* and *Kirby's Adventure*. And there will be shmup sequences! It might sound like a lot, but much of the core engine is complete and it's all gelling nicely.

Why did you decide to pursue the NES style, and why do it with such authenticity?

In the late Noughties/early Tens I was pursuing a vaguely 16-bit aesthetic for *Orange Island*. Eventually, I hit a wall and realised that I was biting off more than I could chew with such a large colour palette and smooth sprite animations. So, I started doing lots of research into NES hardware restrictions. Around the same time, I discovered *Lizard* by Brad Smith and became enthralled by his in-depth articles about developing for the NES.

I would never imply that 8-bit graphics are easy, but the inherent palette and size restrictions makes everything much more manageable for a mostly solo dev team. At the same time, I find it to be like a tricky puzzle to make sure all the NES colours work nicely together and everything makes visual sense. The same is true for writing music for the NES: the small amount of channels and tones ensures that my scope is limited to a degree but it also forces a certain cohesion, which appeals to me as a designer. I like a challenge and I'm pretty stubborn, so it all made sense to stay authentic to the hardware.



» [PC] Small sprites mean that the action should translate well to real NES hardware.

How did you secure *Mana* composer Hiroki Kikuta's involvement in the project?

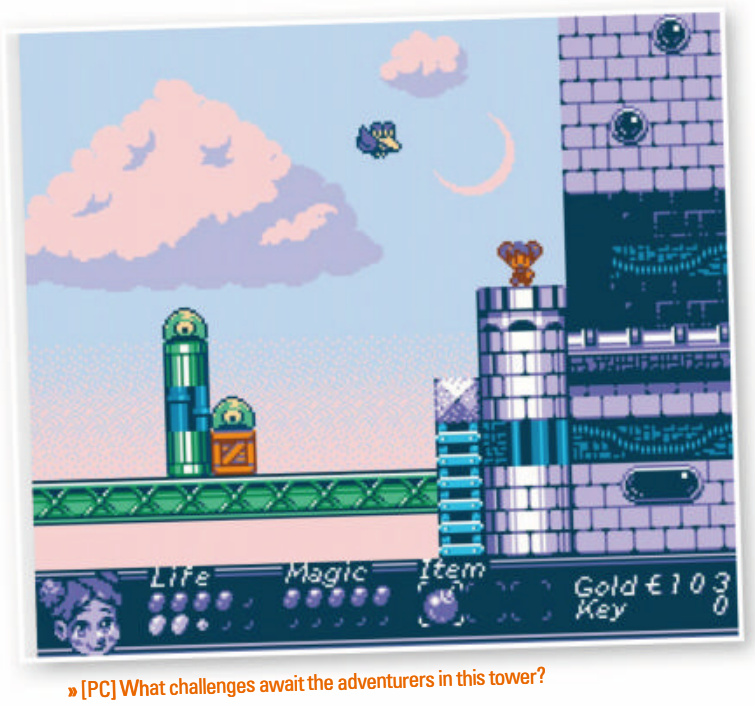
It's still sinking in that Hiroki Kikuta is on-board. Kikuta-san's representative stumbled across *Orange Island* and reached out to me, but it was really early days – I'm not even sure if it was in a playable state back then. So, we stayed in touch over time and I finally decided to pursue a Kickstarter campaign, which made his involvement a possibility. I can't wait to work with him!

Broke Studio is handling the NES version – why did you decide to partner with the team?

I originally came across Broke Studio through their own Kickstarter campaign for *Twin Dragons*. I was pretty much sold on their talent the moment I played that game, and everything I saw about them on social media further proved to me that they knew their stuff. I think our collaboration began when I sent them an early demo of *Orange Island*. Things didn't progress immediately, but the more I showed them the more enthusiastic they became, until they told me that *Orange Island had* to come to the NES. So really, it was a combination of their proficiency and enthusiasm: I only want to work with people who are as excited about the game as I am!

What advice would you give to creators starting their own Kickstarter projects?

Kickstarter is a hard one because there's no exact formula. Looking back at this campaign, I'd probably tell myself to keep it simple. Our campaign was tricky because there were really integral rewards tied to stretch goals, which meant a lot of what-if scenarios. What if the NES port stretch goal wasn't reached? People might have bailed out. So yeah, I'd probably keep the number of reward tiers way down; I got too excited with all the goodies I could give to people. Also, don't worry about pleasing every single person. For instance, introducing a new mid-campaign reward tier might please a lot of people but also annoy many others and make things more confusing for everyone. I found this really crippling and it still eats away at me, but it's an unfortunate truth that you'll have to stick to your gut and risk letting some people down along the way.



» [PC] What challenges await the adventurers in this tower?

BACK TO THE NOUGHTIES

OCTOBER 2002 – It's a bad month for Nintendo, a surprisingly good month for Eighties movie licences and an extraordinary month for Dreamcast owners. What in the heck is going on? Nick Thorpe jumps back in time to find out

NEWS OCTOBER 2002

Washington DC was gripped by a series of seemingly random murders, as sniper fire picked off victims in the American capital. The attacks began with a single killing on 2 October, with five more following the next day, and continued until the perpetrators John Allen Muhammad and Lee Boyd Malvo were arrested on 24 October. Muhammad was tried and convicted of multiple counts of murder and received the death penalty, which was carried out in November 2009. Malvo was only 17 at the time of the killings, and was given multiple life sentences.

The United States continued to gear up for an invasion of Iraq this month, as the Senate voted to give president George W Bush war powers on 11 October, with all Republicans and a majority of Democrats in support.

On 12 October, a coordinated bombing attack on the Indonesian island of Bali killed 202 people and injured over 300 more. One suicide bomber attacked a club, forcing people out into the street where they were hit with a car bomb. The victims were primarily western holidaymakers – 88 of those confirmed dead were Australian citizens, followed by 38 Indonesians and 23 British tourists. Members of the Islamic terrorist group Jemaah Islamiyah claimed responsibility for the attack.

[PC] A photo of Nintendo and the European Commission, or a screenshot of *Hitman 2*? You decide.

THE LATEST NEWS FROM OCTOBER 2002

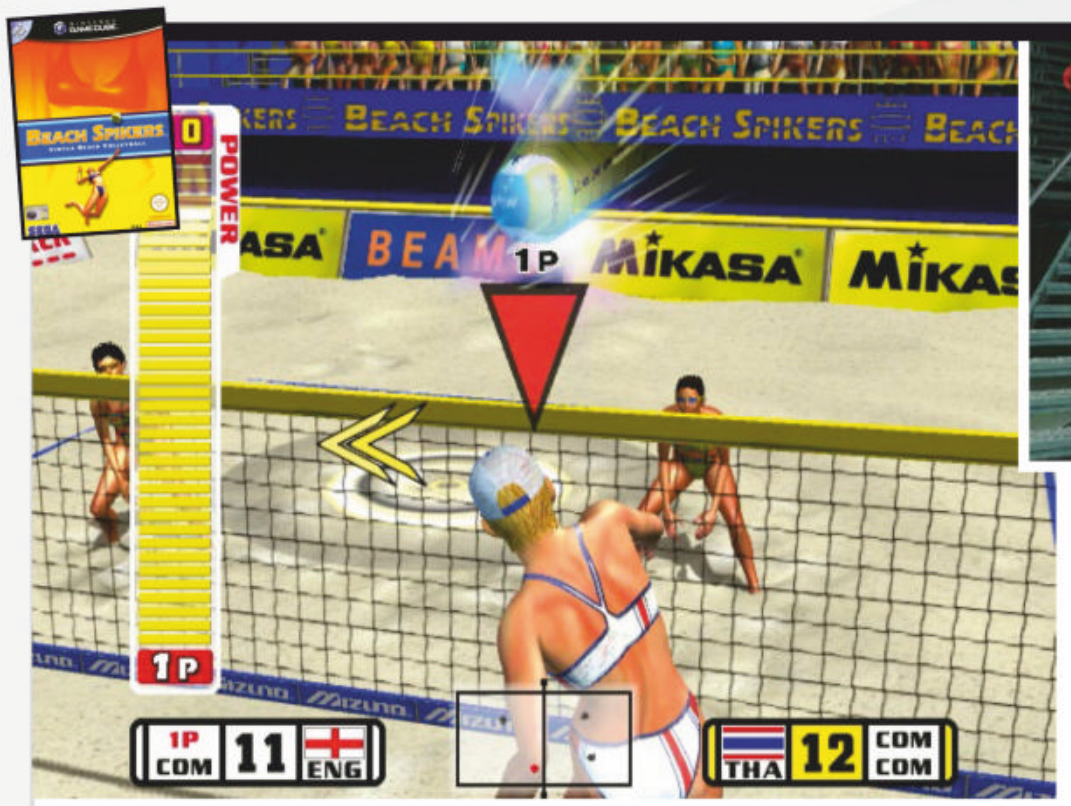
Nintendo's woes continued to accumulate in October, as the European Commission found the company guilty of operating a price-fixing cartel with seven of its European distributors. As a result, Nintendo was hit with a whopping €149.1 million fine, one of the biggest financial penalties ever dished out by the European Union. All seven distributors were also fined for their part in the cartel, with UK distributor John Menzies receiving the largest punishment, an €8.64 million fine. Greek distributor Itochu Corporation was fined €4.5 million, and the remaining five distributors received fines ranging from €0.82 million to €1.5 million. The offences took place between 1991 and 1998, and concerned both hardware and software. According to *The Guardian*, "The commission found that the UK market was actually one of the cheapest in Europe but that Nintendo and Menzies had colluded to ensure that cheap UK products were not re-exported to continental Europe where prices could be up to 66 per cent dearer." Nintendo announced that it would seek to appeal the ruling, while John Menzies considered the fine "totally disproportionate" and was reportedly considering legal options.

[GBA] *Castlevania* was back on Nintendo's handheld – and this time you could see what you were doing.

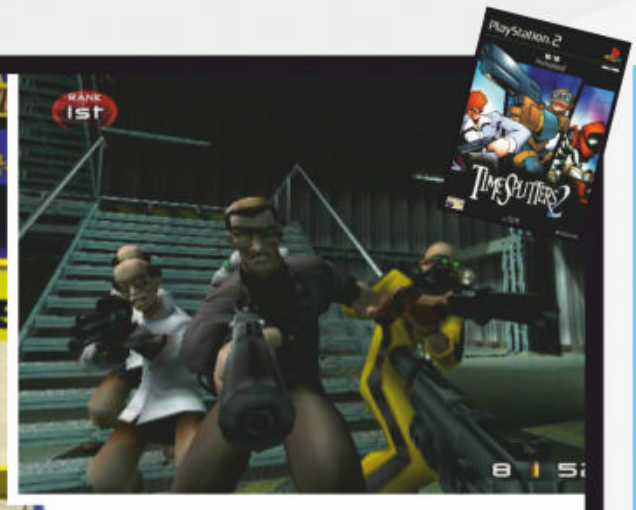
[Xbox] Tazz here hadn't had a televised match in half a year, showing the outdated roster problem well.

Despite a good crop of games arriving as those jingle bells grow ever louder, there was no dispute over which game was taking home the month's quality award. *Timesplitters 2* received a rare 10/10 from *Official PlayStation 2 Magazine*, which described the first-person shooter sequel as "an essential purchase for anyone with a PlayStation 2 and a central nervous system". There were plenty of other worthwhile games on the PS2 this month, too. Horror fans were served a treat in the form of *The Thing*, which scored 85% in *Play* and 9/10 in the *Official PlayStation 2 Magazine*. *Onimusha 2: Samurai's Destiny* also picked up a 9/10 score in the official magazine. *Mat Hoffman's Pro BMX2* scored 7/10 in *OPS2* and 82% in *Play*, with the latter describing it as "a massive improvement over the previous *Mat Hoffman* title" but "nothing too original". Could the trend for extreme sports games be wearing on reviewers? Time will tell.

Beside the long-awaited PAL release of *Resident Evil* (89%, *NGC*), it wasn't a tremendously exciting month for GameCube owners. *NGC* led with an exclusive review of *WWE Wrestlemania*



[GameCube] Like so many Sega arcade conversions, *Beach Spikers* was attractive and enjoyable but lacked content.



[PS2] One of the best launch games for the PS2 gets a similarly scintillating sequel.

[PS2] Kill it! Kill it with fire! It's the only way you'll survive this terrifying movie licence.

X8, but the game turned out to be more like Maven vs Goldust than The Rock vs Hulk Hogan. Lee Hall awarded the game 70%, comparing it unfavourably to the N64's *WWF No Mercy* and complaining of "moments of brilliance marred by minor irritations, and sometimes glaring cock-ups". Sega's beach volleyball title *Beach Spikers* was a worthwhile arcade conversion, marred somewhat by a lack of home content. *NGC* scored the game 79%, opining "if you have some friends who have developed their own teams it becomes an outstanding multiplayer game", while *Edge* gave it 6/10 and said that "in single-player, you ache for the joy of multiplayer" as the world tour mode "feels like a chore".

Hitman 2: Silent Assassin was the biggest PC release of the month, but *PC Gamer*'s Chris Buxton was not wholly impressed and scored it 70%. Although he felt that the game "does improve on its predecessor", Chris highlighted a number of inconsistencies in the behaviour of enemies and bystanders, and complained that mission designs "don't offer nearly enough room for manoeuvre or mistakes". The game also appeared on the Xbox and pleased *XBM*, which awarded it 8/10 and praised the murderous action as "truly addictive". Despite the reviewer's complaints that the game "does get extremely frustrating at times" and features a plot that is "a little on the weak side", he felt that "when you do perform a cleaning job unnoticed the feeling of satisfaction you get is immense".

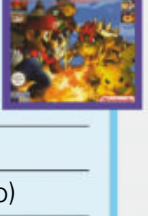
Elsewhere on the Xbox, the system also got a passable game, with *WWE Raw* scoring 7/10 in *XBM* for being "the best wrestling game on the Xbox", in spite of a "lack of depth" and "sorely out of date" character roster. The *Crazy Taxi* series was showing signs of running out of fuel, as *Edge* awarded the game 6/10 declaring, "You have to ask the obvious question: why?" But October wasn't really about the present for Xbox owners, as tantalising glimpses of *Halo 2* were revealed. *Edge*'s cover story revealed that Bungie was attempting to reduce character polygon counts while retaining detail, so as to deliver more complex environments and battles on a grander scale. It also confirmed the inclusion of online multiplayer over Xbox Live, noting that Bungie was "keen not to replicate PC multiplayer gaming" and "wants players to feel like they are sitting on the couch next to each other".

Gaming's biggest small machine, the GBA, also had a treat for players this month, as *Castlevania: Harmony Of Dissonance* scored 86% in *NGC*. The magazine called it "a precisely crafted slow-burner," praising it for possessing "classic *Castlevania* atmosphere" and "movement and pacing drafted in from the classic NES and SNES efforts" – though structurally, the game was far closer to the PlayStation's *Castlevania: Symphony Of The Night*.

Next month, we're expecting a veritable glut of games as we head towards certain winter festivities. Won't you join us again?

CHARTS

OCTOBER 2002



PLAYSTATION 2

1. Medal Of Honor: Frontline (EA)
2. Gran Turismo Concept: 2002 Tokyo-Geneva (Sony)
3. Grand Theft Auto III (Rockstar)
4. Spider-Man (Activision)
5. Prisoner Of War (Codemasters)

XBOX

1. Halo: Combat Evolved (Microsoft)
2. Prisoner Of War (Codemasters)
3. Project Gotham Racing (Microsoft)
4. Enclave (Swing)
5. Dead Or Alive 3 (Microsoft)

GAMECUBE

1. Super Smash Bros Melee (Nintendo)
2. Star Wars: Rogue Leader (Activision)
3. Pikmin (Nintendo)
4. Luigi's Mansion (Nintendo)
5. Super Monkey Ball (Sega)

MUSIC

1. The Ketchup Song [Asereje] (Las Ketchup)
2. New Direction (S Club Juniors)
3. The Long And Winding Road/ Suspicious (Will Young & Gareth Gates)
4. Complicated (Avril Lavigne)
5. All My Life (Foo Fighters)

THIS MONTH IN...

NGC

Print deadlines can be a funny thing, and that's the case here – *NGC* clearly went to press before Rare's sale to Microsoft was announced, as the magazine devotes four pages to readers' ideas for weapons to include in *Perfect Dark Zero*. "I'm sick of maiming my foes with mere knives – give me a katana any day!" says Harry Steele.

Play

Here's the introduction to an eight-page feature: "They come from the pages of the country's leading men's mags, glamour 'catalogues' and tabloid pages to champion games. Yes, here is *Play*'s top ten promotional birds who all have one thing on the brain – to sell software to hormone-addled games players…" We hear barrel-scraping.

Edge

"I was in a games store when I noticed a Dreamcast (second-hand) for £36, less than any GC game. On impulse I bought it along with five or six games (preowned), all priced at under £7," says reader Ben Hall. "I have been astonished at the quality of many of these titles." Where was this evangelism when the console could have used it, eh?

Bomber

YOU'VE NEVER HAD IT SO GOOD

RETROREVIVAL

» ZX81 » 1982 » MIKRO-GEN

The other day, I was visiting my friend's house and watched his son play *Fortnite*.

"Did you play *Fortnite,* uncle Darran, when you were my age?" his son asked me.

I then explained to him that the Switch wasn't out when I was his age, and that back then I didn't actually have my own computer. "So what on earth did you play?" he replied, clearly amazed by this revelation (he's only young, after all). So I told him how I'd go newting with his dad, make camps and go bird watching. "But surely, uncle Darran, you must have played some computer games. What games did you play?"

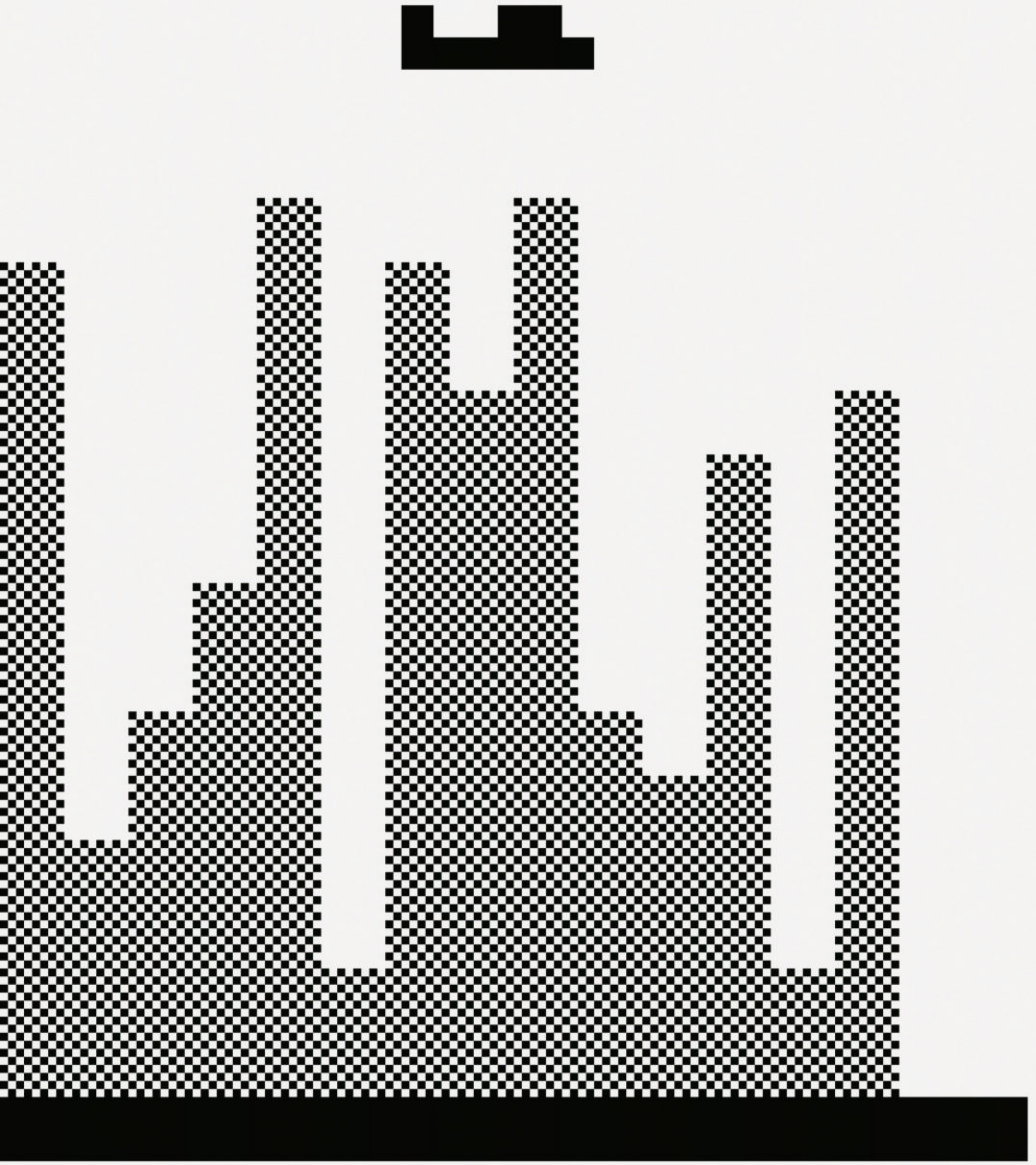
I then proceeded to tell him about my cool friend Paul Elkins who owned a ZX81 that featured black and white visuals, and that most of the actual graphics weren't graphics at all, they were various ASCII characters which had been made to look like graphics. It was at this point that I lost him. Realising he didn't actually want a description, I simply recalled the games I used to play, only to be told that they all "sound boring".

"But look at this," I said to him, whipping out a YouTube video of *Bomber*, "look at how cool this is!"

"That's not cool, uncle Darran, that's just lame. I'm going back to play *Fortnite*."

I thought nothing more about it, but a week or so later he asked to see the "funny game again", not because he was desperate to learn more about the ZX81 or the games I used to enjoy as a kid, but because none of his friends at school believed that games used to be in black and white. I gave him the link and he gleefully ran off – probably to play some more *Fortnite*. "Honestly, you kids don't realise how good you've got it today!" I called after him. And with that simple interaction over an old ZX81 game I'd become my parents, chiding the younger generation for taking things for granted. Bloody *Fortnite*!

IGH SCORE 20



CREATING THE MEGA

DRIVE MINI

In the increasingly crowded world of all-in-one retro consoles, Sega's new offering is a cyber razor cut above the rest. We take the machine for an extended test drive, and speak to staff from Sega and M2 to find out how it was made

WORDS BY NICK THORPE

Just as the high-end console market has evolved over the decades, so too has the market for plug-and-play retro consoles. In the dark days of the early Nineties, systems of questionable legality such as the TV Boy were your only option, but publishers have been officially supporting this sector for a couple of decades now. In between obvious hits like *Pac-Man* and unusual choices such as the *EA Sports FIFA 96/NHL 95* pack, there have been some truly landmark releases. The Atari Flashback 2 was one of the first to mimic the look of the original machine, and was so authentic that you could add a cartridge port to it. The Nintendo Classic Mini: NES captured mainstream attention and raised consumer expectations of what should be included on all-in-one retro consoles. And after spending plenty of time with the Mega Drive Mini, we feel confident in saying that it's another milestone release. The physical product is closer to the original device than any before it, the list of games is an excellent representation of the system's best, and the developers have gone above and beyond in adding extras – not only including regional revisions for each game, but two brand-new games.

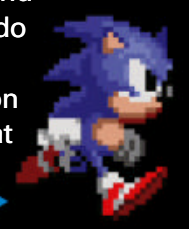
As far as the public is concerned, the story of the Mega Drive Mini starts at the Sega Fes event in April 2018, where the company grabbed plenty of retro-related headlines – it announced the *Sega Ages* range for Nintendo Switch, revealed that a revival of the *Sakura Wars* series was in development, and told fans that the original *Shenmue* games would be getting long-awaited HD remasters on modern consoles. But the biggest announcement was that the company was creating a Mega Drive Mini for release in 2018. The scale of the response was somewhat surprising, given how frequently Sega has released Mega Drive games in compilations and on digital services. Additionally, licensed Mega Drive retro consoles had been available for well over a decade prior, and though it seemed as if Sega would have more involvement with this device than others, this was the only difference of note.

So why did Sega decide to get involved after years of leaving it to other companies? "The Mega Drive launched in 1988 in Japan, 1989 in North America (as the Genesis), and 1990 in Europe, which means it's been roughly 30 years since it debuted," says Hiroyuki Miyazaki, Sega's project leader on the Mega Drive Mini. "Over the years, there have been both licensed products and non-licensed bootleg products in the market, but as the original hardware maker, we thought that it was meaningful to release our own, definitive version." That notion proved correct as players quickly embraced the announcement. It seemed to point the way towards a different product to the existing Mega Drive plug-and-play consoles – a product that might actually rival the quality of the critically and commercially successful Nintendo Classic Mini consoles.

However enthusiasm was soon dampened when it appeared that AtGames, a prolific producer of licensed Mega Drive devices,

» [Mega Drive Mini] To demonstrate the CRT filter in action, here's a regular screenshot of *Sonic The Hedgehog…*

» [Mega Drive Mini] …and here's one with the CRT filter on. It's a strong effect, as you can see, adding prominent scanlines and some blur.



TO BE THIS GOOD HAS TAKEN AGES

WHILE THE MEGA DRIVE MINI IS EXCELLENT, PAST MEGA DRIVE PLUG-AND-PLAY SYSTEMS HAVEN'T BEEN QUITE SO AMAZING

As Miyazaki alluded to, both officially licensed and bootleg Mega Drive plug-and-play systems have been doing the rounds for the best part of a couple of decades now. These haven't always been particularly great, though – in fact, in recent years the licensed products have had a poor reputation.

The first notable officially licensed effort came in 2004 with the release of the Mega Drive Play TV, manufactured by Sega Toys in Japan. The device was pretty simple, with composite AV cables and a single three-button controller wired directly into the main unit, which was powered by four AA batteries. Six games were included – *Altered Beast*, *Dr Robotnik's Mean Bean Machine*, *Flicky*, *Golden Axe*, *Kid Chameleon* and *Sonic The Hedgehog*. This was released to western markets as the Arcade Legends Sega Mega Drive, distributed by Radica. The device's success prompted the release of further versions featuring more Sega games, as well as models featuring licensed titles from Capcom and Codemasters.

AtGames began to manufacture officially licensed clone systems from 2008 onwards. As well as featuring cartridge slots for playing original Mega Drive games, these region-free units often included large numbers of built-in games, and the company often did deals to include a few third-party games such as *Super Street Fighter II* or the *Mortal Kombat* games. The machines even included control ports to support original Mega Drive pads. However, they were notorious for their poor emulation – apart from exhibiting graphical issues with some games, the systems featured awful audio quality.

The Mega Drive/Genesis Flashback was introduced by AtGames in 2017, and attempted to provide a more modern experience. 720p HDMI output was implemented, and features such as a scanline filter, save states and a six-second rewind function were introduced. The system's casing was closer to that of the original, and it again featured a cartridge slot and control ports. While reviewers praised the significantly improved audio, the original units failed to run smoothly, with stuttering visible in all games. An improved model fixed a few of these issues, but by this point AtGames' reputation amongst Mega Drive enthusiasts prevented many from investigating further.

» [Mega Drive Mini] *Thunder Force III* wasn't a licensing problem, as Sega acquired Technosoft's back catalogue a few years ago.

» [Mega Drive Mini] While most of the games play just fine on the included three-button pads, the six-button versions are needed to get the most from *Street Fighter II*.

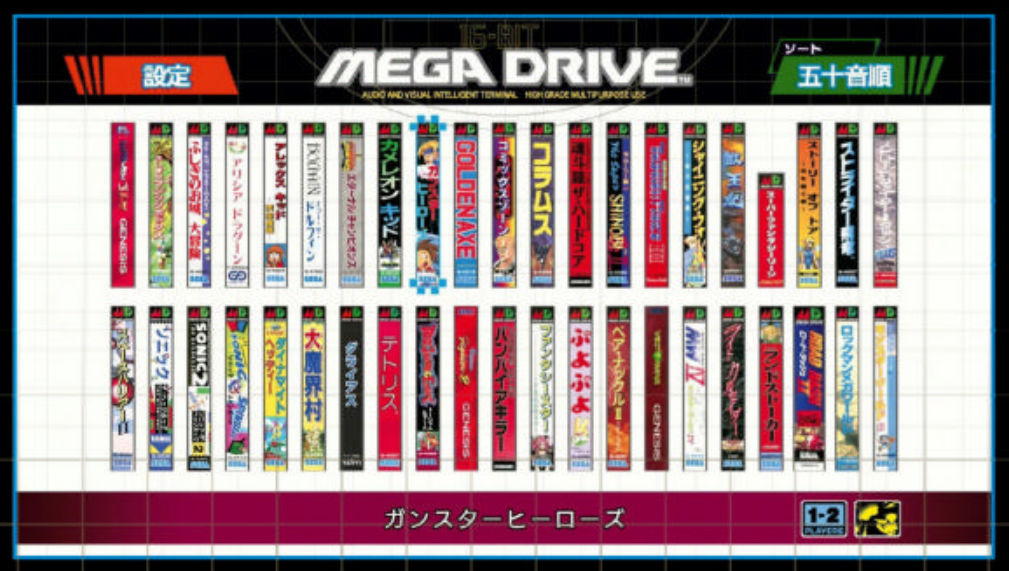
"First and foremost, we wanted to make the controls feel the same as the original release"

HIROYUKI MIYAZAKI

was involved in the project. A week prior to Sega Fes, Sega Games' COO Kenji Matsubara had spoken to *Yahoo! Japan* about plans to reintroduce the Mega Drive hardware by giving a domestic release to the AtGames Genesis Flashback console – a device that had improved over previous offerings, but still received negative reviews. Shortly after the announcement of the Mega Drive Mini, AtGames posted a tweet stating the following: "The rumours are true! Sega is going to release the Mega Drive Mini in Japan, powered by the latest AtGames technology. This same new and improved technology will find its way into the US and other territories later this year!" However, the tweet was deleted soon after. Miyazaki declined to comment on whether AtGames had ever officially been involved in the project.

In September 2018, Sega announced that the Mega Drive Mini would be delayed. The company noted that overseas fans had responded to the product with interest, and that Genesis Mini and Mega Drive Mini models were being prepared for North America and Europe respectively. Additionally, the company announced that the software for the system would be handled by a domestic developer with a proven track record – later revealed to be M2, a decision which boosted fan optimism for the project. "M2 is a long-time development partner of Sega's. Their technical capabilities in emulation – including their attention to detail – places them among the top developers in the world," explains Miyazaki. "I thought that there was no better choice than them to partner with to develop this retro console."

Despite the fact that the team was working with pre-existing games, the project had a number of important requirements that had to be met, as Miyazaki explains. "First and foremost, we wanted to make the controls feel the same as the original release. Additionally, we had some basic required fixes (like the excessive flashing) that had to be done on the emulator," he says, referring to effects in games such as *Contra: Hard Corps*. "This project had newly developed titles and different



» [Mega Drive Mini] Viewing the games by the spine allows all 42 to fit on a single screen. Also, changing the language changes your theme.

» [Mega Drive Mini] On the Mega Drive, the smaller screen means you'll always be right up in his face.

» [Mega Drive Mini] The accuracy of the art is incredible – only the Mega Drive's limited colour palette necessitates any changes.

A NEW GAME IS APPROACHING FAST

THERE'S NOTHING FISHY ABOUT THE NEW MEGA DRIVE CONVERSION OF DARIUS

Though Taito's shoot-'em-up was converted to a number of home computer formats here in the UK, the Japanese market only received contemporary conversions for the PC Engine. The Mega Drive did receive a conversion of *Darius II*, but never received the original – until now, as Hideki Konishi (known as Hidecade in homebrew circles) has programmed a new conversion of the game. This was done with supervision from Taito's staff, including veteran composer Katsuhisa Ishikawa and project manager Yuichi Toyama, who programmed games such as *Musha Aleste* and *Kingdom Grand Prix* at other companies.

The Mega Drive version of *Darius* is graphically very accurate, with some allowances made for the system's limited colour palette, though it naturally doesn't support the ultra-wide display of the original arcade game. It plays very well too, though the reduced screen real estate does make the game somewhat harder, as you have less time to take out enemies once they appear on the screen. Much like the PC Engine's *Super Darius*, this version features 26 bosses – the 11 from the arcade game and 15 more from the original design.

There's no two-player support in this version, but in a nod to *Darius II*'s Mega Drive version both ships are included, as you can choose between Proco and Tiat on the options menu – and in keeping with that game, playing as Tiat is the easier option. The options menu also allows you to select whether you'd like to play with all 26 bosses or just the arcade ones, and can enable a boss rush mode.

language settings too, which made the volume of work massive, yet it was very important to complete all the tasks within a set schedule." But the most surprising requirements to be met were actually regulatory issues. "It's been a long time since Sega has worked on hardware. We didn't have a lot of knowledge about the latest hardware, so this led to some struggles when clearing safety requirements and evaluations in the various regions," admits Miyazaki.

M2 had to achieve the project goals with inexpensive low-spec hardware, similar to that used in other retro gaming devices. Although the company has done wonders with comparatively weak hardware in the past, the constraints still caused headaches because emulation is a tricky beast. "The spec for the Mega Drive Mini is inferior to that of the Switch or the PS4, especially in the memory department," says M2's Takayuki Komabayashi, credited as a director and planner of the Mega Drive Mini. "Not only is the Mini compatible in multiple languages (loading fonts), the box art display changes with the language settings. Making these features work was very challenging, but I believe what we made was worth the effort. The current version is the result of making countless adjustments through to the end."

In fact, readers may be surprised to learn how much say the developers had over what hardware was used. "The main factors are manufacturing and release date, so we do not have much control over this," says Naoki Horii, CEO of M2. Compared to creating games for consoles, Horii feels that "it's nothing but hardship" to work on a dedicated device like this. "We have often had to give up on ideas due to constraints, so again: hardship. Creating new hardware as a home console itself comes with challenges, but this is amplified by having to do everything within constraints in order to keep the costs down. However, by focusing much of our efforts there, we are able to keep the release easy and accessible for our players. Though it's severely challenging until then, it's a rather fair trade," he says. "We give our best with what we have, but I will also say that it can be very, very difficult. However, when looking at it as Sega's new console, it reminds us that anything is possible."

Over the course of a couple of months Sega revealed an excellent line-up of games. This includes obvious first-party hits like *Sonic The Hedgehog* and St*reets Of Rage II*, but also takes in third-party classics like *Castlevania: The New Generation* and *Strider*, and some surprising but welcome deep cuts such as *Alisia Dragoon* and *Super Fantasy Zone*. In total, the device will ship with 42 games – 40 of which were originally released for the Mega Drive from 1988 to 1996, with two bonus games that are brand-new versions of classic games. That total is exactly twice as many as Nintendo included on the SNES equivalent, but Miyazaki doesn't cite that as a factor in the final total.

» [Mega Drive Mini] There's only one racing game on the system, but *Road Rash II* makes for a fine one.

"We cherry-picked titles that we thought were necessary to achieve our concept of 'the age of the Mega Drive', and that is how we ended up with this number of games," he says.

Anyone can create a line-up of essential Mega Drive games, but actually being able to include all of those games on the device legally is a very different proposition. "We struggled more than you can imagine for those titles that other companies and individuals have the rights to," says Miyazaki. For those not familiar with this process, it's a real minefield. It's obvious that Sega doesn't own games like *Street Fighter II* and *Road Rash II*, and had to obtain licences for them. But there's plenty of trickiness even with the games that were originally published by Sega. Where licensed characters appear, such as *Mickey Mouse* and *Donald Duck* in the Disney games, those rights had to be renewed. Even games like *ToeJam & Earl* and *Ecco The Dolphin* have previously missed compilation appearances due to rights issues, but they are all present and correct here. Obtaining those permissions, and doing so on terms that allow the price of the machine to remain competitive, is quite an achievement.

Sega consulted a number of sources to determine what should be included on the device, including the developers working on it. "I provided feedback, but I was not involved in the selection," says Horii. "Yosuke Okunari selected what I believe he considered the seminal titles of that gaming era. His love is definitely there." The line-up varies between Japan and the west, which necessitated the selection of a second line-up – and the

involvement of staff from Sega's international divisions, such as Bill Alexander, VP of production and business development at Sega Of America. "There were a few criteria that we used. First and foremost, we wanted awesome games, and we looked for games that still held up well today. We also wanted titles that captured the nostalgia of that era, games that were emblematic of the Mega Drive," says Bill, referring to the games included on the European and North American systems. "After that, we looked at the line-up as a whole to ensure we had genre diversity while maintaining our focus on quality. Finally, we threw in a few surprises, such as *Monster World IV* and *Tetris*. In the end, we are really excited with how well this line-up turned out, and we hope our fans will agree!"

Indeed, *Monster World IV* was a brilliant surprise given its lack of an English release at the time – the translated version originates from a 2012 Wii Virtual Console release. "The game is quite charming, and while *Monster World IV* may not have been released in the west on the Genesis, the brand is seeing a resurgence today, which makes it the perfect opportunity to introduce this classic," says Bill, explaining its inclusion. Then there are the two bonus games, *Darius* and *Tetris*. *Darius* is a brand-new conversion of Taito's arcade shoot-'em-up, programmed by noted homebrew coder Hideki Konishi. *Tetris* is also included, but it's not the original Mega Drive release. "The Mega Drive version of *Tetris* was never released, so there is no need to release the product as it was back then," says Miyazaki, explaining this decision. "With that in mind, we asked ourselves, 'What is the legendary *Tetris* that the Sega fans back then yearned after?' We decided to completely recreate the arcade version of *Tetris* that was a huge hit back in the day. Since cartridge space isn't as expensive as it was back then, we didn't have to be frugal about it, and we are satisfied with how it turned out."

> "We also wanted titles that captured the nostalgia of that era, games that were emblematic of the Mega Drive"
> BILL ALEXANDER

» [Mega Drive Mini] *Castle Of Illusion Starring Mickey Mouse* nicely highlights the licences Sega has acquired.

As Horii alluded to earlier, compromises had to be made – for example, there are no Mega-CD or 32X games included on the system. "Of course, we did consider it, but we gave up after considering the difficult technical aspects, development period and costs. We know all too well that there is no project where you can include everything you want," says Miyazaki. "It was also a shame that we had to forego some titles that were higher risk when considering today's society's standards." While he doesn't name any in particular, there are certainly some that spring to mind – the original Japanese release of *Bare Knuckle III* would cause outrage today, for example. But what has been included is excellent, hitting almost every box you could wish to check – there are lengthy single-player games, fun multiplayer games, a good spread of different genres and plenty of titles that are now rare and expensive. The only big gap is a lack of sports games, and while it's understandable due to the fact that many of the iconic ones would be difficult to license, it's still a shame because of the system's prominent association with the genre.

But what really stands out to us is some of Sega's characteristic excess. The Mega Drive Mini has a moving volume slider, a removable expansion port cover and functional cartridge slot flaps – all of which are solely decorative. "There really wasn't a long, serious discussion about this. These features stemmed from conversations we had internally like: 'It'd be good if this part moved, huh?' 'Yeah, you're right.' 'It'll cost more, but it's fun so let's do it,'" Miyazaki tells us. "I thought that it would've been a little embarrassing if no one noticed, but I'm glad that it has garnered more attention than I thought it would." The company may make money back on that decision though, as it has enabled the creation of further decorations such as mini Mega-CD and 32X units that are available to Japanese players. And speaking of going overboard, the company commissioned new menu music from none other than Yuzo Koshiro. "As you can tell from the Mega Drive Mini's line-up, Mr Koshiro has provided many wonderful tracks for the Mega Drive. As a composer, he is the pride of Japan and has had an active career from then till

SPIN WAR

THE VERSION OF TETRIS ON THE MEGA DRIVE MINI ISN'T QUITE THE SAME AS THAT FABLED CARTRIDGE

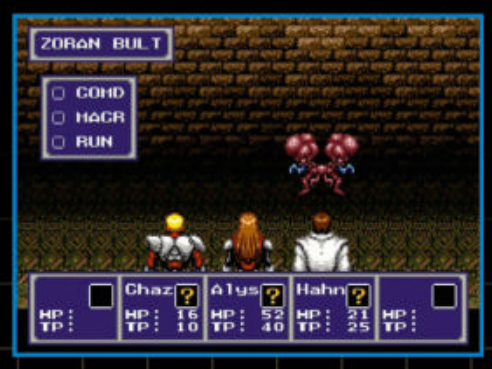
The inclusion of *Tetris* on the Mega Drive Mini is exciting, as the Mega Drive version of *Tetris* is known to be one of the rarest games in existence – just a few copies made it out into the wild, as *Tetris* was subject to a licensing nightmare that ultimately prevented this version from going on sale properly. Sega doesn't consider that version to have been released and excludes it from the official list of Mega Drive games, although it was included on *Sega Ages 2500 Vol 28: Tetris Collection* for the PlayStation 2.

However, as Miyazaki said, this version is a brand-new version designed to replicate Sega's arcade version from 1988. Compared to the original Mega Drive version, the graphics are closer to the System 16 original with a cleaner presentation. The game is a little more lenient with the time it allows before pieces lock, too. Since the ability to use special item blocks and choose your starting level were not included in the arcade version, they haven't been included here – and nor has the Doubles game.

Interestingly, the new Mega Drive *Tetris* does improve on the arcade game. The arcade game only offered rotation in one direction, which is the default for the Mega Drive game, too. However, the options menu allows you to set clockwise and counter-clockwise rotation to any buttons you'd like, and a brand-new hard drop option has been included, too. This helps the game feel a little closer to modern versions of *Tetris*.

» [Mega Drive] The original Mega Drive release had coarse colours, different block designs and large boxes covering the background.

» [Mega Drive Mini] The new version is more accurate, and improves how the Mega Drive's limited colour palette is used.



» [Mega Drive Mini] If you're looking for longer games, *Phantasy Star IV* and the other RPGs will definitely keep you occupied for a while.

» [Mega Drive Mini] *Alisia Dragoon* isn't commonly included in Mega Drive products, so it was a welcome surprise to see it here.

now," says Miyazaki. "Originally, we thought that it might be rude to ask such a legend to compose just the menu music, but he was more than willing to contribute, so we jumped at the opportunity."

» If the prospect of collecting Mega Drive games makes your wallet whimper, the Mini is a cost-effective alternative.

It's clear that an awful lot of thought and effort has gone into making the Mega Drive Mini the best dedicated retro gaming console on the market. And given that Nintendo has previously set the bar in that regard, it does evoke memories of the great console war of the Nineties – the inclusion of precisely twice as many games as the SNES equivalent featured, and twice as many previously unreleased games, feels like a very deliberate one. Combined with those presentational flourishes, anyone who was on the blue team in the early Nineties should find that same Sega spirit here.

But naturally, in a business that is always preoccupied with the next big thing, players are already looking to the future. Could we soon see devices based on other Sega consoles, like a Master System Mini or perhaps the frequently requested Dreamcast Mini? "Should the Mega Drive Mini sell 10 million units, I'm sure we'll release other consoles," teases Miyazaki. It's a tall order, especially considering that such sales would put it in a similar league to the Saturn and the Dreamcast – but it's not out of the realms of possibility. The Nintendo Classic Mini: SNES sold over 5 million units in around six months, and Mega Drive fans have been clamouring for a product of a similar quality. Sega has now built it, so all that remains is to see if the players will come.

SEGA WORLD

ALTHOUGH YOU'LL GET JAPANESE GAMES, JAPAN ISN'T GETTING THE SAME MEGA DRIVE MINI

While the Mega Drive Mini does include regional variants of all its games, much like every other retro plug-and-play device, it does vary content by region. The European and North American releases will be cosmetically different but feature the same games. The Japanese version comes with a single six-button controller instead of two three-button controllers, and its list of games features plenty of expensive shoot-'em-ups, as well as incomprehensible text-heavy games. The Asian release features a mixture of the two, with some tantalising exclusives of its own including the brilliant *Alien Soldier*. Here's a handy list of what's on each:

GAME	EUROPE/ NORTH AMERICA	JAPAN	ASIA
ALEX KIDD IN THE ENCHANTED CASTLE	✔	✘	✘
ALIEN SOLDIER	✘	✘	✔
ALISIA DRAGOON	✔	✔	✔
ALTERED BEAST	✔	✘	✘
ASSAULT SUIT LEYNOS	✘	✔	✔
CASTLE OF ILLUSION STARRING MICKEY MOUSE	✔	✘	✔
CASTLEVANIA: BLOODLINES/THE NEW GENERATION	✔	✔	✔
COLUMNS	✔	✔	✔
COMIX ZONE	✔	✔	✔
CONTRA: HARD CORPS/PROBOTECTOR	✔	✔	✔
DARIUS	✔	✔	✔
DR ROBOTNIK'S MEAN BEAN MACHINE	✔	✘	✔
DYNA BROTHERS 2	✘	✔	✘
DYNAMITE HEADDY	✔	✔	✘
EARTHWORM JIM	✔	✘	✘
ECCO THE DOLPHIN	✔	✘	✘
ETERNAL CHAMPIONS	✔	✘	✘
GAME NO KANZUME OTOKUYOU	✘	✔	✔
GHOULS 'N GHOSTS	✔	✔	✔
GOLDEN AXE	✔	✔	✔
GUNSTAR HEROES	✔	✔	✔
THE HYBRID FRONT	✘	✔	✘
KID CHAMELEON	✔	✘	✘
LANDSTALKER	✔	✔	✔
LANGRISSER II	✘	✔	✔
LIGHT CRUSADER	✔	✘	✘
LORD MONARCH	✘	✔	✘
MADOU MONOGATARI I	✘	✔	✘
MEGA MAN: THE WILY WARS	✔	✔	✔
MONSTER WORLD IV	✔	✔	✔
MUSHA ALESTE	✘	✔	✔
OUTRUN 2019	✘	✘	✔
PARTY QUIZ MEGA Q	✘	✔	✘
PHANTASY STAR IV	✔	✔	✔
POWERBALL	✘	✔	✔
PUYO PUYO 2	✘	✔	✔
PUZZLE & ACTION: TANT-R	✘	✔	✔
RENT A HERO	✘	✔	✘
THE REVENGE OF SHINOBI	✘	✔	✔
ROAD RASH II	✔	✔	✔
SHINING FORCE	✔	✔	✔
SHINING FORCE II	✘	✘	✔
SHINOBI III: RETURN OF THE NINJA MASTER	✔	✘	✘
SLAP FIGHT MD	✘	✔	✔
SNOW BROS: NICK & TOM	✘	✔	✔
SONIC SPINBALL	✔	✘	✘
SONIC THE HEDGEHOG	✔	✘	✔
SONIC THE HEDGEHOG 2	✔	✔	✔
SPACE HARRIER II	✔	✔	✔
STREET FIGHTER II: SPECIAL CHAMPION EDITION	✔	✔	✘
STREETS OF RAGE II	✔	✔	✔
THE STORY OF THOR/BEYOND OASIS	✔	✔	✔
STRIDER	✔	✘	✔
SUPER FANTASY ZONE	✔	✔	✔
SWORD OF VERMILION	✘	✘	✔
TETRIS	✔	✔	✔
THUNDER FORCE III	✔	✔	✔
TOEJAM & EARL	✔	✘	✘
VECTORMAN	✔	✘	✘
VIRTUA FIGHTER 2	✔	✘	✘
WONDER BOY IN MONSTER WORLD	✔	✘	✔
WORLD OF ILLUSION	✔	✔	✔
YU YU HAKUSHO: MAKYOU TOITSUSEN	✘	✔	✘

MARCH OF

THE LAST FEW YEARS HAVE SEEN A PROLIFERATION OF PLUG-AND-PLAY RELEASES BASED ON CONSOLES – HERE'S HOW THEY ALL STACK UP AGAINST EACH OTHER

NINTENDO CLASSIC MINI:NES

YEAR: 2016
INITIAL PRICE: £59.99
CONTROLLERS INCLUDED: 1
GAMES: 30
60HZ: YES
REGION SELECTION: NO
SCREEN OPTIONS: PIXEL PERFECT, 4:3, 4:3 WITH CRT FILTER
ADDITIONAL FEATURES: FOUR SAVE STATES PER GAME

Nintendo's first entry into the plug-and-play retro console market reset expectations for what such consoles should offer. The miniaturised NES was authentic to look at and offered first-party build quality, and while it's easy to forget this because of everything that followed, the list of games was truly astonishing – Nintendo had clearly gone out of its way to secure a selection of games that offered variety, quality and nostalgic appeal. The console was an instant success and second-hand prices skyrocketed as demand outstripped supply for the best part of a year.

While this system was a huge success, it did have some flaws. The choice to supply only a single controller was not ideal, and the cables on the ones supplied were incredibly short. The system also exhibited some sound latency problems, and simple scaling caused a shimmering effect when scrolling backgrounds in 4:3 mode.

NINTENDO CLASSIC MINI:SNES

YEAR: 2017
INITIAL PRICE: £69.99
CONTROLLERS INCLUDED: 2
GAMES: 21
60HZ: YES
REGION SELECTION: NO
SCREEN OPTIONS: PIXEL PERFECT, 4:3, 4:3 WITH CRT FILTER, SELECTABLE FRAMES
ADDITIONAL FEATURES: FOUR SAVE STATES PER GAME, REWIND MODE

Nintendo's second bite at the cherry proved even better than the first. In its plug-and-play rendition, the 16-bit system offered slightly smaller selection of games than its older brother. However, the ones that did make it in were excellent, again including key third-party offerings as well as Nintendo's excellent work. But the biggest story here was the inclusion of *Star Fox 2*, the legendary unreleased Super FX game – legally available in its complete form for the first time ever.

Emulation quality was improved over that of the NES retro console, with a less noticeable audio delay and an interpolation effect that kept shimmering artefacts at bay during scrolling scenes. The decision to include two controllers straight out of the box was also handy, as it allowed friends to just get on with beating each other up in *Street Fighter II*. The cables were a bit longer too, which was nice.

THE MINS

NEO-GEO MINI: 40TH ANNIVERSARY

YEAR: 2018
INITIAL PRICE: £129.99
CONTROLLERS INCLUDED: 1 (BUILT-IN)
GAMES: 40
60HZ: YES
REGION SELECTION: NO
SCREEN OPTIONS: 4:3, 16:9, SMOOTHING FILTER
ADDITIONAL FEATURES: BUILT-IN LCD DISPLAY, FOUR SAVE STATES PER GAME, VIRTUAL MEMORY CARD

SNK took a rather different approach with its retro system, choosing to make the unit a self-contained miniature arcade machine. Although the cramped control panel was surprisingly usable and the LCD display was excellent, this meant that players wanting to play with friends or play on a TV were stuffed unless they bought expensive Mini HDMI and USB Type-C controllers on top of an already expensive unit. That wasn't an ideal solution, though – the TV output was blurry and the controllers had altered button layouts and non-microswitched thumbsticks.

If those things didn't matter to you, the selection of 40 games was comparatively generous and included plenty of awesome games to enjoy– although that number didn't include any third-party games, and some of the choices were a tad baffling (*Top Player's Golf* over *Neo Turf Masters*, really?). SNK has since reissued the device with differing game line-ups and bundled controllers and cables, making it more attractive.

PLAYSTATION CLASSIC

YEAR: 2018
INITIAL PRICE: £89.99
CONTROLLERS INCLUDED: 2
GAMES: 20
60HZ: SOME GAMES
REGION SELECTION: NO
SCREEN OPTIONS: NONE
ADDITIONAL FEATURES: ONE SAVE STATE PER GAME, VIRTUAL MEMORY CARD

The PlayStation Classic is a cautionary tale of what can happen when a retro device fails to come together properly. The exterior was excellent, with good control pads and a cute replica of the original machine. But the list of games, while good in its own right, was widely judged to have omitted too many of the system's greatest hits – rather than welcoming *Metal Gear Solid*, *Final Fantasy VII*, *Resident Evil* and *Tekken 3*, players questioned the lack of *Tomb Raider*, *WipEout*, *Gran Turismo* and *Crash Bandicoot*.

Things went from bad to worse in gameplay. Some games played slowly thanks to the bizarre inclusion of some 50Hz PAL versions (even outside of Europe), and the combination of hardware and emulation software wasn't adequate to run games smoothly. Despite the popularity of the original PlayStation, its plug-and-play counterpart has ended up as heavily discounted bargain bin fodder.

MEGA DRIVE MINI

YEAR: 2019
INITIAL PRICE: £69.99
CONTROLLERS INCLUDED: 2
GAMES: 42
60HZ: YES
REGION SELECTION: YES
SCREEN OPTIONS: 4:3, 16:9, CRT FILTER, SELECTABLE FRAMES
ADDITIONAL FEATURES: FOUR SAVE STATES PER GAME, OPTIONAL DECORATIVE CARTRIDGES/MEGA-CD/32X

Based on the unit we've had access to, we feel that Sega's machine is the new standard-bearer in the retro console market. The Mega Drive Mini features a rather generous and undeniably great line-up of games at a very reasonable price, with emulation that does them justice and the feature set you'd hope for. The inclusion of new bonus games and the option to choose between regional variants is the icing on the cake.

It's not quite a perfect product, though. The inclusion of three-button controllers is fine for the vast majority of games, but *Street Fighter II* and *Eternal Champions* really suffer from not having six-button controllers. There's also a shimmering effect visible on horizontal scrolling in the few games designed to run at 256x224, though the CRT filter mitigates this. The inclusion of a rewind feature like the SNES Mini has would have been nice too, but it's far from essential.

ON THE HORIZON...

Although the Mega Drive Mini is great, it's not the last word in dedicated retro devices. The Capcom Home Arcade is releasing around the same time, though at £199 and with only 16 games, we suspect the audience may be quite different. Konami will release its PC Engine Mini (or Turbografx Mini/CoreGrafx Mini, depending on your region) in March 2020, which has also had the benefit of M2's involvement. SNK has also teased a "next-gen Neo-Geo hardware" that can apparently link to the Neo-Geo Mini, but we don't have any further information on that just yet.

MASTER OF RETRO: **THE STORY OF**

M2

EVER SINCE IT RELEASED ITS FIRST GAME IN 1993, M2 HAS CONSTANTLY GONE OUT OF ITS WAY TO DELIVER THE BEST POSSIBLE GAMING EXPERIENCES. HERE WE DISCOVER THE PASSION AND LOVE FOR OLD GAMES THAT ALLOWS NAOKI HORII AND HIS TEAM TO CONSTANTLY PUSH NEW BOUNDARIES

Words by Darran Jones

M2 and quality go hand in hand, and it appears impossible to have one without the other.

When the *Sega Ages 2500* series started to go off the boil due to some lacklustre remakes, it was M2's excellent compilations that helped turn interest in the brand around. You can easily spot an M2 project, as the company tends to go above and beyond; when Square Enix wanted to re-release its *Mana* games on Nintendo's Switch, for example, it was M2 that handled development, while adding a brand-new English translation for *Trials Of Mana* so western gamers could finally enjoy an official version. The revered developer has worked with some of the biggest publishers in the world, breathing new life into a host of classic franchises, including *Castlevania*, *Contra* and even *Sonic The Hedgehog*.

M2 is currently busier than ever, thanks to its ongoing work with the *Sega Ages* range on Switch, the incoming release of the Mega Drive Mini and the recent news that it is the powerhouse behind Konami's PC Engine Mini, which is due in 2020. This prolific period of activity is a golden age for a company that has developed a reputation, both within the industry and with its fans, for not only the accurate emulation it performs, but also its technical proficiency and willingness to constantly go the extra mile in order to ensure that its releases are as good as they can possibly be.

Watch My Life In Gaming's excellent documentary, *M2: Complete Works* and you'll hear the members of M2 described as everything from "super geniuses" to "the gold standard in emulating older games onto modern platforms". We're constantly amazed by the tales we hear about M2's ingenuity and technical prowess, so it's somewhat humbling to hear how M2's CEO, Naoki Horii, started off in the games industry. "I did not receive any formal training in school," he tells us, "but it was a time where bookstores were full of material teaching how to use a computer from zero knowledge, so anyone was able to do it if they were willing to learn."

One such person prepared to learn the inner workings of home computers was long-time M2 member and chief programmer Tetsuya Abe, who coded M2's first commercial game, *Gauntlet IV*. "I was self-taught and my teacher was the textbook," he jokes with us. "After learning the basics, I began with creating tools and modifying games, and it wasn't until university that I considered creating a game myself. When creating my first game, I chose *Gauntlet* as my template as it was a game I spent many hours playing during secondary school and I had a complete picture of the specs in my head."

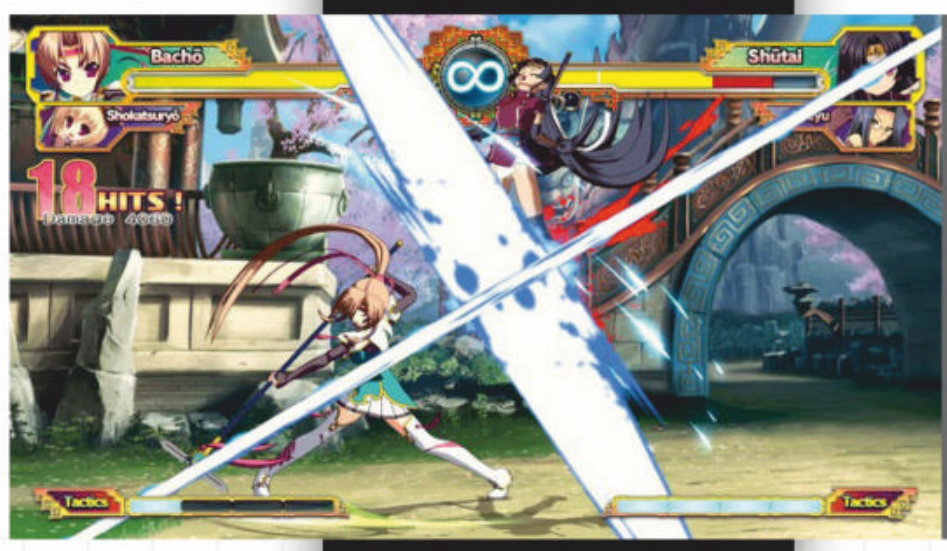
M2 is renowned for its technical skills in pushing hardware, so it should perhaps come as no surprise that one of the first computers that the company used was Sharp's expensive X68000, which was so powerful it was capable of producing stunningly accurate arcade ports. A fact that wasn't lost on

> **"I earnestly admired Atari games in general"**
> Naoki Horii

» [Mega Drive] M2's conversion of *Gauntlet* feels extremely accurate and also supports the Mega Drive's 4-Player Adaptor.

» [Game Gear] Although certain elements had to be cut, M2's version of *Gunstar Heroes* is still very impressive.

» [PS2] Many of M2's compilations allow you to tweak a variety of different settings, including adding scanlines.



BEYOND RETRO

THERE'S MORE TO M2 THAN JUST REMAKING CLASSIC GAMES

We've largely focused on the sterling retro work that M2 has created over the years, but it's worth remembering that M2 doesn't just remake and port old games for a living. The developer has actually made a number of original titles since the late Nineties, starting with *Doki Doki Poyacchio* for the PlayStation and covering a diverse range of systems, including the Game Boy Advance, Nintendo DS, PSP, PC and, more recently, Nintendo's Switch. Many of these games are typically exclusive to Japan, like the adaptation of the manga series, *Occultic;Nine* and the visual novel, *Dunamis 15*, but many of its PC games are starting to appear on services like Steam, including *Malus Code*, *Koihime Enbu* and *Tokyo School Life*.

The most success M2 has had with original games in the west is arguably its selection of *ReBirth* releases that were created for Konami in the late Noughties. The three games were based on *Castlevania*, *Gradius* and *Contra* and all were critically well received. Sadly, they're no longer available to buy anywhere. "We would like to be better known for this and continue doing this work," admits Horii. "There is still a mountain of titles like this that we would love to work on. To the game creators out there: we are accepting invitations!"

M2 also does a fair amount of technical support, too, and creates middleware that is then licensed out to other companies. Examples of this include E-mote, which speeds up the animation process when creating characters and has been used in everything from Namco's *Graffiti Smash*, to MangaGamer's *Go Go Nippon*.

» [Mega Drive] *Gauntlet*'s Quest mode enables the adventurers to explore four elementally themed towers and has light RPG elements.

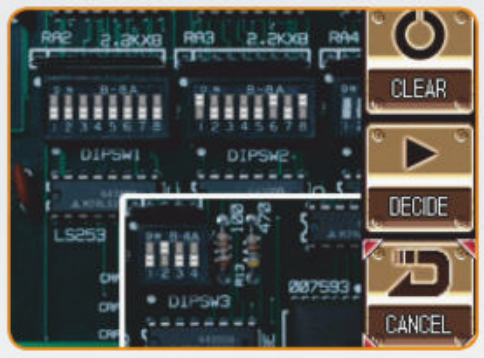
» [Wii] M2 released nearly 100 Mega Drive games on the Wii's Virtual Console, including Sega's port of *Strider*.

» [Wii] Games like *Castlevania Rebirth* proved that M2 could not only make great original games, but also respect the series at the same time.

» [Xbox 360] M2's *Capcom Arcade Cabinet* featured 17 games that were released across five packs of three games, with two free titles if you had the full set.

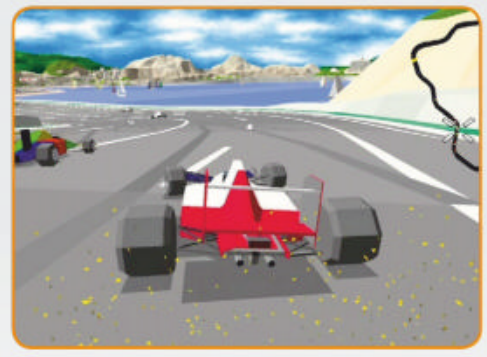
ABOVE AND BEYOND
THE LITTLE EXTRAS THAT MAKE M2 GAMES STAND OUT

Gauntlet IV
M2's first game set a tradition of going the extra mile, which has persisted within the company to this day. The actual conversion of *Gauntlet* is impressive enough, but it also comes with an expansive Quest mode, which adds light RPG elements and has the heroes questing through five large towers. Additionally, a Record mode and Battle mode are also included, meaning there's plenty of replay value.



Konami Classics Series: Arcade Hits
One of the things we love about M2's games is the attention to detail that they offer. Take the Konami and Namco DS compilations the company made. In addition to creating authentic representations of each game and adding all sorts of supplementary materials, M2 went so far as to include representations of the PCBs so you could adjust the dipswitches using your stylus.

Fantasy Zone II
This one always blows us away. When M2 released its *Fantasy Zone* compilation for the PS2 in 2008, the company decided to make an arcade version of *Fantasy Zone II* as M2's CEO had always been disappointed that the original Master System game never had an arcade release. To achieve this, M2 created the game using original System 16 hardware, paying the additional costs to complete it when the original budget wouldn't stretch.



Sega Ages: Virtua Racing
M2 delivers more technical wizardry by converting Sega's polygonal arcade racer and pulling out all the stops. In addition to getting the game to run at 60 frames per second (the arcade was 30) this port also massively increases the draw distance, greatly ups the resolution and adds music from the 32X release. It also allows up to eight players to compete on a single Switch!

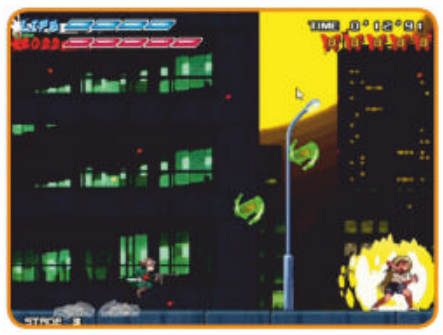
the team. "It's not so much that we chose the X68000, per se, but the hardware was really impressive – capable of reproducing even *Gradius* – so our whole staff decided to take the plunge and buy one," explains Horii. "I was relieved to find that it was easy to port from the X68000 to the Mega Drive. I think that if the X68000 had never been released, I would have bought myself an Amiga for *Marble Madness* and *Interceptor* (though I did buy one later on for *Lemmings* and Megademo)," he adds with a chuckle. For Abe, the decision to go with Sharp's expensive hardware was straightforward – it would easily allow M2 to achieve the goals it wanted. "The main reason was that this computer was the best one for creating games," he states. "Not only were the hardware specs suited for them, the development environment for programs like the C Compiler was also substantial. It was a powerful machine for software development."

» [Switch] The *Contra Collection* includes all versions of *Hard Corps* with it. This is the PAL version, *Probotector*.

The ease with which Sharp games could be ported to Sega's Mega Drive, meant that the console became the focus for M2's very first game. It also allowed Abe to finally make the project he started at university a reality. "*Gauntlet* was the first arcade game that I ever really played seriously. It was my favourite," the veteran developer enthuses. "The game required a lot of strategy: players had to make their way through levels by utilising various techniques and switching playstyles, all while planning how they would use their magic as well. Playing the game with these aspects in mind appealed to me a lot." Horii also elaborates on the reason for converting Atari's then-aging arcade game to the Mega Drive. "I was overwhelmed by *Gauntlet*'s labyrinthine atmosphere," he tells us. "In fact, I earnestly admired Atari games in general. I also remember seeing screenshots of *Gauntlet* for the Atari ST in a Japanese magazine, and I dreamed of playing a high-quality version of that game in my home in Japan."

As impressive as M2's conversion of *Gauntlet* was for the time. Publisher Tengen felt it was lacking something for the home console market and asked M2 to add something extra. These additions would not only allow the studio to get its first game published, but would also define the company's approach to converting classic games going forward. "Since the arcade version was endless, we thought adding a story mode with an ending would provide a sense of accomplishment and fulfilment," explains Abe. "Also, we had created a map that could be easily cleared by players using traditional arcade techniques, so we thought it would be cool to introduce players to lesser-known techniques, too."

M2's excellent work on *Gauntlet* caught the eye of Sega which approached the company to make a title for its Game Gear system. After several rejections, M2 suggested an ambitious conversion of the Mega Drive's *Gunstar Heroes*, Treasure's debut run-and-gun which has been a big hit on the 16-bit machine. M2 went to work on the project but soon learned converting Treasure's game wouldn't be easy and that certain things would have to be changed or omitted entirely. "There were two reasons for the changes: limited development and limited ROM capacity," explains Jun Okada, *Gunstar*'s chief programmer. "Between these two, the latter was the bigger issue. 'Dice Palace' was the very first stage to be cut. This palace was constructed using an assortment of stages, which naturally occupied more ROM space. With tears streaming down our faces, we decided on its elimination." That wasn't the end, though. The minecart stage was retooled so Red used a jet pack to move around the stage, the Seven Force battle was changed significantly and several other levels received tweaks. The biggest omission, however, was the loss of the second player, Blue. "I believe cutting out Blue as a playable character was a big deal for our players," continues Okada. "The various actions performed by the playable characters also consume a lot of ROM capacity. When we discovered that we didn't have any space to spare, our hearts were broken as we also eliminated Blue."

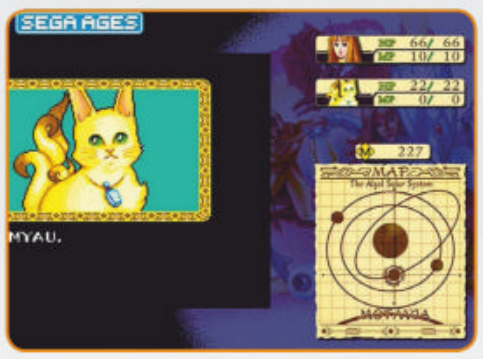


» [PC] *Bloody Butterfly* is one of M2's most recent original releases and made its debut in 2018.

It's not unusual to see cuts made to conversions, particularly arcade ones, but M2 wasn't happy that so many drastic changes were being made to a game that the team had so much respect for. The obvious solution, to M2 at least, was to retcon the game to take into account the changes that had been made. "Simply eliminating Blue would mean erasing the character's existence. Therefore, we created a new scenario with the premise that Blue worked for another faction," explains Okada. "Players may see Blue in his ship in the background of the final stage fighting Seven Force. This scene is meant to convey that Blue is acting as a decoy to lure Green. It also conveys the rematch against the

3D Out Run

All of M2's 3D games look superb, but we have a special spot for this *Out Run* conversion. Like *Space Harrier*, *After Burner* and *Power Drift*, it features a mode to simulate the movement of the original deluxe cabinet. Additionally, the framerate is doubled to 60 (although a 30fps option is included) completing stages unlocks upgrades for your Ferrari and two new tracks, *Cruising Line* and *Camino A Mi Amor,* have been added.



Sega Ages: Phantasy Star

Phantasy Star is a good example of M2 having a tinker and creating something that vastly improves on the original release. The new Ages mode is superb as it makes a number of changes. Random encounters pop up less often, there's now a useful menu that better explains the game's items, spells and magic and you'll receive far more money and experience points. This is all rounded off with an excellent automapping feature.

THE SEGA CONNECTION

THE PARTNERSHIP WITH THE JAPANESE PUBLISHER RUNS DEEP

SEGA AGES 2500

Sega's budget series for the PS2 was rather hit and miss initially, thanks to a range of remakes that ranged from the great (*Virtua Fighter 2*) to the terrible (*Golden Axe*). M2 became involved with the series from *Volume 20*, contributing perfect ports for a range of classic games, including *Space Harrier*, *Monster World*, *Fantasy Zone* and *Gunstar Heroes*.

SEGA VINTAGE COLLECTION

M2's next significant collaboration with Sega saw it converting a number of collections for the Xbox 360 and PS3, many of which had been previously available as separate releases. The mini compilations included *Golden Axe* and *Streets Of Rage* trilogies, as well as the *Monster World Collection*, which included a previously untranslated version of *Monster World IV*.

3D CLASSICS

M2 worked wonders on the 3DS and delivered a bunch of excellent Mega Drive and arcade ports (with additional Master System and SG-1000 ports for the physical compilation releases). In addition to offering excellent-looking 3D, many of the games have additional extras that range from new game mechanics to hilarious credit sequences (hello, *Streets Of Rage 2*).

SEGA AGES SWITCH

M2's recent projects are currently exclusive to Nintendo Switch and include a range of enhanced Master System, arcade and Mega Drive games, including *Sonic The Hedgehog*, *Gain Ground* and *Columns II*. 11 titles have been released on the hybrid console so far and M2 has already announced an additional eight, including *Shinobi*, *Herzog Zwei* and *G-LOC: Air Battle*.

MEGA DRIVE MINI

By now you'll know all about M2's latest partnership with Sega and just how impressed we've been with the miniature system. It features all the excellent emulation you'd expect from M2, as well as two exclusive new games and a plethora of extras, like the ability to play different regional versions of classic games.

"We receive requests for games that the publishers want to release themselves, but at times we will be the ones pushing the request"

Naoki Horii

'eliminated' Seven Force along with the elimination of the shooting stage. This is as much detail as I'll go into, so we encourage those interested to experience the endings for both versions. We believe this will give players that 'aha!' moment."

While it was only released in Japan, *Gunstar Heroes* did well enough that M2 soon became Sega's go-to team for retro-based projects, something that has continued to this day. The company did several projects for Sega including porting the first *Sakura Taisen* game from Saturn to PC and doing extensive work on the *Sega Ages 2500* series that was created for the PlayStation 2. Where other companies were largely making full remakes of classic Sega games, M2 instead decided to emulate the original versions to make them as accurate as possible to their arcade or home system counterparts. *Space Harrier*, the *Monster World* games and *Gunstar Heroes* (along with *Dynamite Headdy* and *Alien Soldier*) were just a few of the games that were tackled, and the company soon caught the eye of other publishers who wanted to breathe life into their classics. "We typically receive requests for games that the publishers want to release themselves but at times we will be the ones pushing the request," explains Horii about the long-running relationship M2 has developed with the likes of Sega and Konami. "The titles released by M2 are ones we requested… though, now I think about it, a lot of them are simply ones that the staff wanted themselves."

Horii and his team don't just take on projects because they love the games they work on – they also feel that it's important to preserve these classic titles so that new generations can enjoy them. "I believe it is vital from an archival standpoint, so we will strive for accuracy within the scope of what we can do," continues Horii. "The number one reason is to not tarnish the nostalgic memory when [remaking] the title, so we make a conscious effort to avoid a disappointing port. This is most apparent when actually playing the game, but the lack of a direct I/O controller, hardware for frame buffering, LCD TV with high resolution – these all add increasing challenges when emulating the retro feel of a game."

Working on old games isn't easy, however, mainly because required resources might not be available. We've reported many times over the years how certain games are lost forever because their original source codes have gone missing, so companies like M2 are often at the mercy of the publishers when it comes to converting a classic game. "There are times when we have nothing," admits Horii. "When this happens, we gather whatever information we can find and send them

to the developers. Often, we will have a functional board or cartridge, but no data on the source code. On the rare occasion that the source code is available, we would sometimes learn that the original staff members had personally kept it." Equally important to M2 is that all the additional furniture that goes alongside the main code is included, too, so that means poster art, arcade bevel layouts, old production material and anything else that gives value to the final product. It's another aspect of the painstaking curation which M2 performs that isn't always easy. "We often receive them directly from the publishers, but there are just as many instances where the M2 staff, passionate about the game, would gather them by pleading and threatening," Horii laughs.

He's joking of course about making threats, but it does highlight the commitment Horii's team has to the games they create. For M2 it's not enough to create an accurate version of a classic game, it also wants to modernise it and make it feel more special, whether it's adding completely new stages, remixing the credit sequence, or adding adjustments that dramatically increase the performance of a game. Adding extras in its ports has become something of a calling card for M2, but it isn't always easy and it can often mean that the original code has to be tinkered with, or other approaches need to be made in order to get the desired effects. "While some are integrated internally, there are others that are done externally," explains Horii. "Many people may already know about the 3D integration [for Sega's *3D Ages* range] but a virtual version of the Mega Drive capable of displaying 3D was developed and dubbed the 'GigaDrive'. The code for this emulation was implemented into the 3DS. Creating an emulator of a nonexistent hardware is insane, but fun. Emulating fictitious hardware is nothing new to us, and we see ourselves continuing this as part of our mission to add new content."

More recently M2 has been impressing shmup fans with its *ShotTriggers* series, which has been converting classics *Ketsui*, *Battle Garegga*, *Sorcer Striker* and *Dangun Feveron* to the PS4, with cult favourite *ESP RaDe* due out shortly. The series is another example of the team creating something they have an active interest in. "I think we were largely affected by seeing our beloved shooting games losing traction," explains Horii. "We feared that nobody would revive these titles again. We thought that if there are still fans of this genre out there, then this would be our opportunity. Many of the staff members of M2 are lovers of shooting games – so much so that we held a round of *Battle Garegga* while cherry blossom viewing with some libations."

And it's reveals like the above that make us glad companies like M2 exist. Its team of passionate developers not only go beyond the call to bring these classic games to as many people as possible, but they do it because they generally live and breathe videogames. It's somewhat fitting, then, that when our interview was concluded, Naoki Horii had one final thing to say. "This is a question for our players," he concludes. "Do you love games? What do you love about them? Is there something that you would like M2 to work on (within reason)? Please contact Horii with your responses!" If that doesn't empathise M2's love to please the people that love its games, then nothing will.

» [Xbox One] The devs at M2 love shoot-'em-ups, so a series devoted to classics like *Battle Garegga* made perfect sense.

» [3DS] M2 has ported *Gunstar Heroes* a number of times over the years. Its 3D conversion is arguably the most technically astonishing.

» M2's version of *Gunstar Heroes* is in high demand. You can expect to pay from £60 to £190 depending on overall condition.

» [PS3] M2 released a number of games for SNK as part of its NeoGeo Station service. This is *Shock Troopers*.

PEER PRAISE

DIGITAL ECLIPSE'S MIKE MIKA AND FRANK CIFALDI EXPLAIN WHAT MAKES M2 SO SPECIAL

When did you first hear of M2?

Frank Cifaldi: The first time I ever heard of M2 was when they were working with Sega on the *Sega Ages* series for the PS2. I was already a long-time fan and advocate for game preservation through software emulation, and I thought the *Ages* strategy of repackaging these games on modern systems was brilliant.

Mike Mika: If we go a little further back, I discovered M2 on the Genesis with their amazing port and update of *Gauntlet*, which they called *Gauntlet IV*. It was the primary reason I bought a Genesis. I was absolutely smitten with the game and that led to becoming a die-hard fan of the team behind it.

» Frank Cifaldi works at Digital Eclipse as head of restoration.

» Mike Mika is Digital Eclipse's studio head and has great respect for M2.

What was it about the studio's games that first stood out for you?

FC: The first moment where I thought to myself, 'Okay, these guys get it,' was when I saw that *Sega Ages 2500 Vol 25: Gunstar Heroes: Treasure Box* included a beta build of *Gunstar Heroes* on the Mega Drive. I'd been actively documenting incomplete game builds through, uh, 'legally questionable' means for years by that point; it was my hobby and my passion. So to see a commercial product acknowledge that was immensely gratifying for me. It was the first time my eyes were opened to the possibility that fans like me were also working in the industry itself.

MM: *Sega Ages Virtua Racing*. I used to travel hours to Cedar Point, a theme park in Ohio, with my friends to play the four-player arcade game. At the time, it was one of the most eye-popping and technically advanced games that I had ever seen. The Switch release by M2 is the ultimate fan service of the game, completely aware of what made it so magical. Playing side-by-side local multiplayer, it turns out, is so much more important than even I thought that it made me double down on the notion that porting and emulation isn't just a technical exercise, but a contextual and emotional one, too. You need to port the moment – the sights, sounds and social environment that surround the game.

» Digital Eclipse's excellent SNK compilation has a cool 'Watch' mode that even surpasses M2.

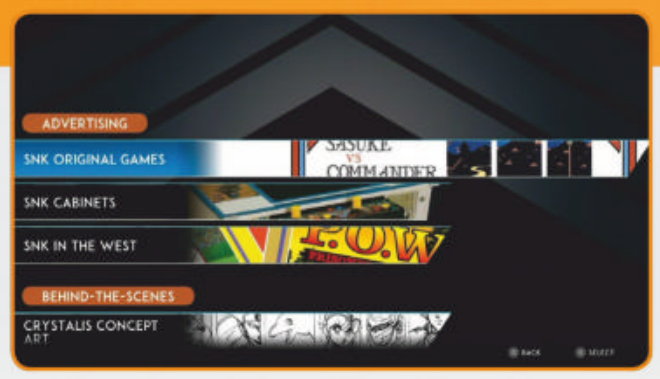
How much technical proficiency is required to get old games to run flawlessly (or as close to it) on newer systems?

MM: I think the big thing that we all struggle with, and I know M2 would say the same thing, is reducing the time between pressing a button and seeing the result on-screen. There was no perceivable latency if you were playing, say, a Mega Drive on a CRT television. In our new digital world, this is no longer possible. All modern game systems have input lag, because all modern systems and all modern televisions have to do some amount of processing before they actually draw to the screen. In new games you basically don't notice because they're designed with those limitations in mind, so when an older game is put on these platforms, sensitive players notice immediately that they don't feel the same as they did in the old days.

» [Switch] Mike feels M2's version of *Virtua Racing* nails the original game.

***Tell us how M2 inspired the Challenge mode in Digitial Eclipse's* Mega Man Legacy Collection.**

FC: Challenge mode in *Mega Man Legacy Collection* was directly inspired by the PS3 version of *Monster World IV*. That game had a new mode that unlocked once you beat the main game that challenged you to speedrun through three of the game's dungeons, with a timer on the screen and results at the end. When it came time to do *Mega Man Legacy Collection* with Capcom, the main feature that was requested was that we create new levels and challenges for players in the original game. At first we discussed actually taking the time to hack these ROMs directly to make new mini challenge stages. However, the time and budget constraints on the project made this unfeasible, so we tried to come up with new ways of playing the original games. That's when we took inspiration from M2 – instead of creating new content, we remixed what was already there.



ATHENA
EN ROUTE TO THE WORLD OF FOREST (GAME START - WORLD 1) 1:49
HAMADRIUS GOLEM NEPTUNE (BOSS 1, 2, 3) 1:15
WORLD OF THE CAVE (WORLD 2) 0:49
WORLD OF THE SEA (WORLD 3) 2:12
WORLD OF THE SKY (WORLD 4) 1:26
GRYUPUS CHIMERA MADO (BOSS 4, 5, 6) 0:46
WORLD OF THE ICE (WORLD 5) 1:34
WORLD OF THE HELL (WORLD 6) 1:17

So not only do the Challenge levels in *MMLC* warp you between the different games in the series, they also give you powers and abilities that you're not meant to have in certain parts of the game, meaning that even the most seasoned speedrunners can have a new toy to play with.

What would you consider to be M2's crowning achievement so far, and why?

FC: I can't stop thinking about *Sega Ages: Phantasy Star*. They found the perfect balance between improving the gameplay for modern audiences without actually changing the core game at all. The changes M2 made – an automapping function, reduced random encounters, increased fight bonuses, faster walking – only make the game better, without altering the original intent in any way. I played through the remake with all of the enhancements on, and it was the same game I've always loved… it just respected my time a lot more. I think about this a lot; I think all of us who are in the business of bringing back old titles on modern platforms could learn a lot from this.

As you have a similar line of work as a games developer, have you ever found yourself competing directly with M2?

FC: If I feel any sense of competition with M2, it's not a competition in the business world, it's purely a creative competition. We'll see something they've done and slap our foreheads and go, 'Why didn't we think of that?' and then we'll hunker down and fire back with an idea that we hope will get the same reaction out of them. I don't know if they're familiar with our work or not, but I really hope we've gotten them at least once.

MM: I agree with Frank. On the business side, I think we'd be more likely to collaborate with M2 than compete. There are very few of us doing this sort of work, and we each have our own style and approach that, organically I think, emerged from being in the same space for so long. I find it fascinating that I can download an M2 game and still have a pure consumer perspective and be surprised and appreciate it without any sort of jaded or critical eye. Sure, later I go into a dissection, but I can go into the product unbiased and enjoy it. That's a huge testament to their love for the genre.

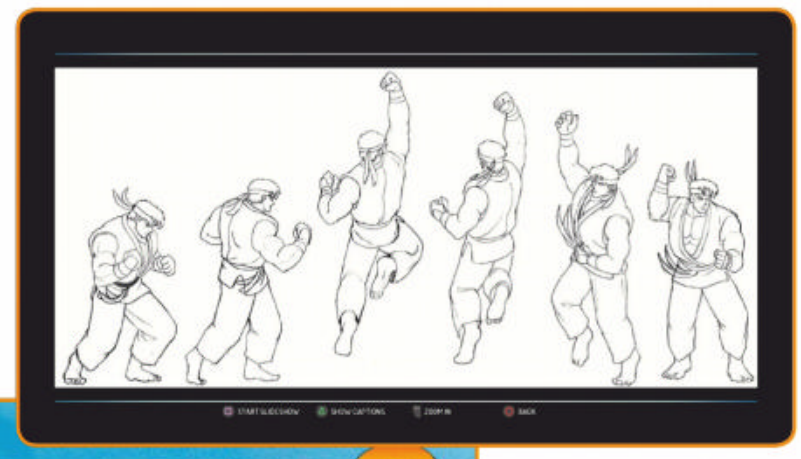
Could you ever see yourselves collaborating with M2 in the future?

MM: I don't know if it makes sense logistically, but sure, I can see a collaboration happening. We both have specific strengths that the other does not, which keeps things interesting! A lot of us here have an editorial background, so we excel at the 'virtual museum' aspect that we put into our products. If there is a key difference between M2 and Digital Eclipse philosophically, I'd say that M2 approaches its products as fans, and we approach them as educators.

FC: What I often say is that we don't make games, we make art books you play on a TV, and we're great at tracking down original development materials, getting them into the games, and educating our audiences on history and context. M2, on the other hand, excels more than we do on the technical side of actually editing older games to make them more accessible. It would be really interesting to see how those two philosophies could come together. Maybe it would be an awkward clash, or maybe it would be even better than something we could do on our own. It's fun to think about!

> **"I think we'd be more likely to collaborate with M2 than compete. There are very few of us doing this sort of work"**
> Mike Mika

» Frank is a big fan of M2's *Phantasy Star* re-release, considering it one of the studio's best achievements.



» [PS4] Digital Eclipse's *Street Fighter* collection features a staggering amount of behind-the-scenes material.

» [PS4] The *Mega Man* collection challenges were directly inspired by an earlier M2 game, *Monster World IV*.

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THE MAKING OF

Astroclone

Despite great reviews, Steve Turner's Avalon adventures sold poorly, which prompted the developer to change direction. Steve reveals how he combined arcade firefights with devious puzzles in his cosmic follow-up, Astroclone

WORDS BY RORY MILNE

IN THE KNOW

- **PUBLISHER:** HEWSON CONSULTANTS
- **DEVELOPER:** STEVE TURNER
- **RELEASED:** 1985
- **PLATFORM:** ZX SPECTRUM
- **GENRE:** ADVENTURE

The UK games magazines of the Eighties worked really hard to connect with their teenaged readers, with the likes of *Crash* and *Zzap!64* even going as far as trusting their reviews to schoolkids. But despite these recommendations, the sales charts of the day often included games that received scathing write-ups in the computer press, and omitted others that reviewers had heaped with praise. Steve Turner's *Avalon* and *Dragontorc* fell into the second category, and so rather than continuing the fantasy adventure series, he devised a genre-defying sci-fi follow-up to the trilogy of shoot-'em-ups that had launched his career. "The whole point of *Astroclone* was that Andrew Hewson had told me that a third game in the *Avalon* series wouldn't sell," Steve acknowledges. "He said that there had been some really poor sales for the games and that I needed to do something different. So I tried to shake it up as much as I could using as much of the same code as the previous titles to make it commercially viable – I couldn't just start from scratch."

The graphics engine for *Astroclone* did require a rewrite, however, and to make sure that it was working Steve coded a proof of concept that ended up as his game's opening stage. "It was a bit weird, really, because what I had started working on was completely rewriting my graphics engine," Steve ponders. "Hewson, among others, had criticised the *Avalon* games' flickering graphics, and I knew a better technique to do it. So I wrote this new engine, and to test it I mocked up a *Defender*-type game. The bit that I changed was that when you went up and down the laser angled up and down. I liked playing it, so I thought I might as well have it as the intro for the game, but I focused on my 'Plan B', which was to put a space scenario behind my adventure engine."

Besides opening with a shooter, Steve differentiated *Astroclone* from his earlier adventures by giving his work-in-progress an innovative mode that, when entered, allowed its hero to manipulate up to four items. "I liked the fact that you could only carry a limited number of objects around," Steve argues. "Basically I was using the same principle as the wizard's sack in *Dragontorc*,

» [ZX Spectrum] Many of *Astroclone*'s Seiddab bases have sub-levels that you have to beam down to.

"I wanted puzzle sequences that made sense, so that you could deduce them rather than just trying every object with every other object"

STEVE TURNER

but instead of the little spirit you controlled the hero's arm, which could select objects. And I thought I could do it so that if you let go of an object while you were moving his arm you could throw things."

Of course, the items in *Astroclone* required a purpose, and as with Steve's *Avalon* titles, his latest game's objects would have to be combined to solve puzzles. "I wanted puzzle sequences that made sense, so that you could deduce them rather than just trying every object with every other object," Steve reasons. "But because I didn't have a mythology to borrow ideas from I tried to take ideas from technology, like machines not working and computers breaking when you spilled things on them. So I was trying to think of all the IT things and jokes that went around, and base puzzles on them."

As well as incorporating existing technology into *Astroclone*, Steve also used his game's futuristic setting as an excuse to invent new tech, such as 'Isocases,' which were bigger on the inside and held multiple items. "Those were my sci-fi equivalent of treasure chests!" Steve enthuses. "I was playing a game at the time with my kids where instead of finding one item you found a magic key now and then that opened a treasure chest. Then you got several items, which was really exciting. I think that influenced the Isocases, because I was translating all of the elements in fantasy games into science fiction, so magic became technology."

Another aspect of *Astroclone* didn't require translation, however, as its 3D gunsight mode was a natural fit for the sci-fi title's adventure stage. Although the mechanic did take inspiration from the project Steve's colleague was working on. "Andrew Braybrook had a gunsight in *Paradroid*, but his algorithms never quite worked," Steve notes. "He couldn't get it so that the gunsight moved around as the player's character moved around, but I was sure that it would work. So when I had the

DEVELOPER HIGHLIGHTS

QUAZATRON (PICTURED)
SYSTEM: ZX SPECTRUM
YEAR: 1986

RANARAMA
SYSTEM: ZX SPECTRUM, VARIOUS
YEAR: 1987

BUSHIDO
SYSTEM: COMMODORE 64
YEAR: 1989

» As well as developing his latest game, Steve Turner is also returning to commercial coding.

» [ZX Spectrum] *Astroclone* begins in the control deck of a starship orbiting high above Earth.

» [ZX Spectrum] The Seiddab bases in *Astroclone* are guarded by droids that have to be dispatched.

hero walking around in *Astroclone* I wanted him to fire at things, and I thought I'd try to do a gunsight so that I could add pressure by having the Seiddab come at you to make it a firefight."

The one issue with *Astroclone*'s gunsight-equipped laser pack was that it was overly effective, which skewed the game's difficulty level requiring Steve to limit its charge, and to make recharging an involved process that left the game's hero defenceless. "I had this problem with *Astroclone* where you got too powerful too quickly," Steve recollects, "and I needed a negative to balance that, so that was the idea behind the weapon recharging, to introduce some risk while you were doing that."

But while Steve was keen to give *Astroclone* more arcade elements than its predecessors, he limited his latest game's arsenal to its laser pack until a much later stage required a more powerful weapon, which he dubbed the 'Acron Device'. "I felt that the weapons were the sci-fi versions of the missile spells in *Avalon*," Steve considers, "and I thought you could have a range, but in the end I decided that I didn't want to make things too complex by making the player carry lots.

» [ZX Spectrum] There are messages in *Astroclone* that give you clues, but they're tricky to get hold of.

» [ZX Spectrum] Puzzles include setting explosives in one room and detonating them in another.

▶ The thing with Avalon's spells was that they were on a scroll rather than in a backpack, so it was a different kind of system. I didn't have a scroll in *Astroclone*, so there had to be objects, and I didn't really want too many."

Although restricted to just two weapons, *Astroclone* did gain a third method of dispatching the game's Seiddab opponents after Steve introduced a deadly force field that players could lead their foes into. "I was always trying to think of little twists for less obvious ways of doing things," Steve reflects, "and it wasn't very expensive to do coding-wise. I just loved the idea of enemies with a particular vulnerability, because you usually just shot things, so it made players have to go into another mode of thinking."

Two other elements of *Astroclone* that were designed to shape the player's mindset came in the form of energy and oxygen recharge stations, which Steve intentionally limited. "I really wanted to pressure the player," Steve remembers. "The idea was that it was a relief when you found the recharge points, which gave you the sense that you had to pace yourself to get to the next ones. In some fantasy games you had food everywhere and you had to collect it, and I did consider having a sci-fi equivalent, but I decided that I wanted the objects in *Astroclone* to be connected to the adventure rather than them just being collected."

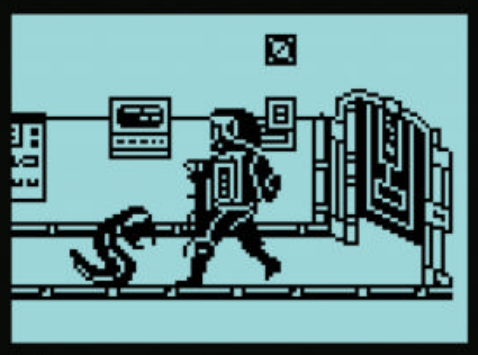
But in order to balance the difficulty of *Astroclone*'s game design, Steve tempered his game's meagre opportunities to recharge by giving players multiple clones to complete his adventure with. "I can remember playtesting *Astroclone*, and I wanted to give players a restart point," Steve remembers. "In *Avalon*, you could just save the game where you were and keep going from that point. So instead of that I was trying to give *Astroclone* a way to go back, because you had lives, which fitted in nicely with the game's name: *Astroclone*. It wasn't actually your character in the game, but you had several clones of your character. So you went through those, and the number of clones just came from playtesting."

Besides using *Astroclone*'s sci-fi narrative to give its gameplay meaning, Steve also leveraged the storyline to tie his game's adventure sections together by hiding messages in them that gave clues to their overall objectives. "There was what I called 'local puzzles', which were like twigs and branches of a tree," Steve explains, "and they were all connected to the trunk of the 'main puzzles'. But I struggled in *Astroclone* to get that main trunk, and I wanted to give you the reason for how the whole game fitted together. So I used messages to do that. I was trying to give a sense of you gradually getting the knowledge that you needed, and I quite liked the idea of having something to collect that was significant, rather than just being of a local interest, so that's what the messages were meant to do."

> "I was trying to please everybody, but perhaps I was trying too hard. Adventure players couldn't really manage the shoot-'em-up bit, and the people that could manage that bit weren't the adventure-y type"
>
> STEVE TURNER

ACING ASTROCLONE

HOW TO MASTER STEVE TURNER'S SCI-FI ADVENTURE



SPACE COMBAT

Your first trip into space is through Seiddab-free territory, but *Astroclone*'s occupied sectors are full of enemy ships. Your craft can only take a few hits, and even crashing into opponents drains your limited energy. So the key is to blast a safe space around yourself, and then carve out a path towards the Seiddab boss.

STAR SECTOR STRATEGY

You have to visit *Astroclone*'s grid-based strategy stage in order to travel between its star sectors. The important areas have docking satellites leading to Seiddab bases, but you can only identify these by beaming into each sector one by one, and the satellites don't become operational until you've dispatched their bosses.

CHART YOUR PROGRESS

The adventure section in *Astroclone* spans multiple bases, each of which spans many rooms, so you need to make maps or you're going to get lost. Each room is one of four colours, and there are rustic mine levels as well as high-tech ones, which aids navigation, but the lack of landmarks ensures that map-making is essential.

By the time *Astroclone* was ready to hit stores, it boasted a multilayered adventure at its core, a recurring *Defender*-type stage and a strategy section where players and the Seiddab fought to dominate a star chart, but as reviews came in for the game Steve's heart sank. "I thought it was a masterpiece," Steve remembers, "and I thought the magazines were going to wonder how the hell I got all of that in a Spectrum. So I was quite astounded when all reviewers seemed to look at was the first little bit and then didn't seem to get the depth of the adventure. I was trying to please everybody, but perhaps I was trying too hard. Adventure players couldn't really manage the shoot-'em-up bit, and the people that could manage that bit weren't the adventure-y type."

» [ZX Spectrum] Your lasers don't harm certain Seiddab opponents, but you can lead them into deadly force fields.

Decades after its release, Steve is still disappointed with the response to his innovative adventure, but the developer's belief in the game is unshaken, and he would only make the smallest of changes to it given hindsight. "There are things that I would tweak," Steve concedes, "but I was surprised how well it still played when I tried it recently. I found the shoot-'em-up bits at the beginning really hard, but once I was in the bases I loved the way that the fighting worked, and I found the marching around very atmospheric. The only thing I might change there is to go back to dark screens with light graphics, I think *Astroclone* could have been more exciting like that. But on the whole I still love the design. I just think it's a shame that more people couldn't appreciate it, but then games aren't always to everybody's taste." ✱

» [ZX Spectrum] Some levels in *Astroclone* are empty, but most contain puzzles or aggressive Seiddab droids.

» [ZX Spectrum] *Astroclone* has many 'lock and key' puzzles, such as using sonic keys to open Isocases.

» [ZX Spectrum] The puzzles in *Astroclone* are often based around combining likely objects to find a third.

PROBLEM SOLVING

The puzzles in *Astroclone*'s adventure are solved by combining items that are protected by Seiddab droids or hidden around their bases. Certain objects will fry the computers, which shuts the bases down, but finding them typically depends on finding and combining others first, so it's vital that you search every room.

KNOW YOUR LIMITS

Several aspects of the adventure in *Astroclone* are metered. You have an energy bar that's depleted by enemy fire, an oxygen level that decreases as you move around and a laser pack with limited ammo. There are recharge points, but these are usually post-level, so speedy progress and sparing use of your weapon are strongly advised.

THE SEIDDAB QUARTET

GRAFTGOLD'S FOUR-PART SCI-FI SAGA

3D SPACE WARS

At its core, *3D Space Wars* reimagines Namco's *Galaxian* in three dimensions, with the Seiddab forces swooping in and out of the screen, rather than up and down. Of course, there's more to Steve's debut title, most obviously the need to refuel by docking with fuel stations and fleets of different ships that mark your progress through the levels.

3D SEIDDAB ATTACK

Steve's follow-up to *Space Wars* takes the action down to Earth and swaps your spacecraft for an armoured tank. You're tasked with picking Seiddab fighters out of the sky, with the reward for meeting your quota being a duel with their boss. Defeating it results in a rural mission where you have to take down an entire squadron of Seiddab bombers.

3D LUNATTACK

3D Lunattack improves on its predecessors in various ways. Steve's third Seiddab title has a rotating playfield rather than a fixed horizon, which gives a greater sensation of movement, and a cursor that toggles between weapons and a navigation tool depending on its position. The game also has three distinct zones with unique hazards and foes.

ASTROCLONE

As well as continuing the storyline established in Steve's previous Seiddab titles, the adventure in *Astroclone* acts as a spiritual successor to his *Avalon* series. It's more of an arcade adventure, however, thanks to its 3D firefights and emphasis on level clearing. *Astroclone* also incorporates side-on shoot-'em-up and strategy-based sections.

Bad Dudes Vs Dragon Ninja

THIS MEMORY IS BROUGHT TO YOU BY ANTSTREAM

RETROREVIVAL

» ARCADE » 1988 » DATA EAST

When I was a youngster, I would regularly visit Quay Amusements in Poole because it was an incredible arcade that had virtually every big game you could think of at the time. I would regularly visit it with friends at the weekend, and typically I'd head over there with Wayne Osbourne as we had similar taste in games.

Wayne would always want to play *Bad Dudes Vs Dragon Ninja*, partly because he was a big fan of the whole ninja craze that was going on at the time, and partly because he was really into karate and loved Jean-Claude Van Damme films. More importantly, however, he was really good at it – like seriously good at it. He got so skilled at it that he was able to complete the game on a few credits and I'd normally be there at his side riding his coattails as boss after boss fell to his mad button skills.

I've never been any good at *Dragon Ninja*, but because Wayne had more money than me we'd typically end up playing whatever he wanted (which I was fine with, obviously). You'd think that with all those free credits I'd have upped my game over the six months it probably stayed at Quay Amusements, but no, I remained completely rubbish at it and I would continually get chided as we played, because let's face it, I was little to no help.

I'm not sure why I could never get on with Data East's beat-'em-up. I was pretty good at *Double Dragon* and *Golden Axe,* and could regularly complete them on a single credit, but *Dragon Ninja* felt like an impossible challenge. Maybe it was the lack of moves, or the sheer onslaught of enemies, but I could never really get beyond the second stage on a single credit unless I was assisted by Wayne – and even then I'd sloppily lose lives because I would take risks or just bungle my attacks like an idiot.

I have not seen Wayne for over two decades, but I can remember those games of *Dragon Ninja* we played at Quay Amusements like they were yesterday. And that memory of us only popped into my head because I was watching Nick play *Dragon Ninja* while he was reviewing Antstream. Isn't it funny where your mind goes?

DATA EAST USA

SHADOW DANCER

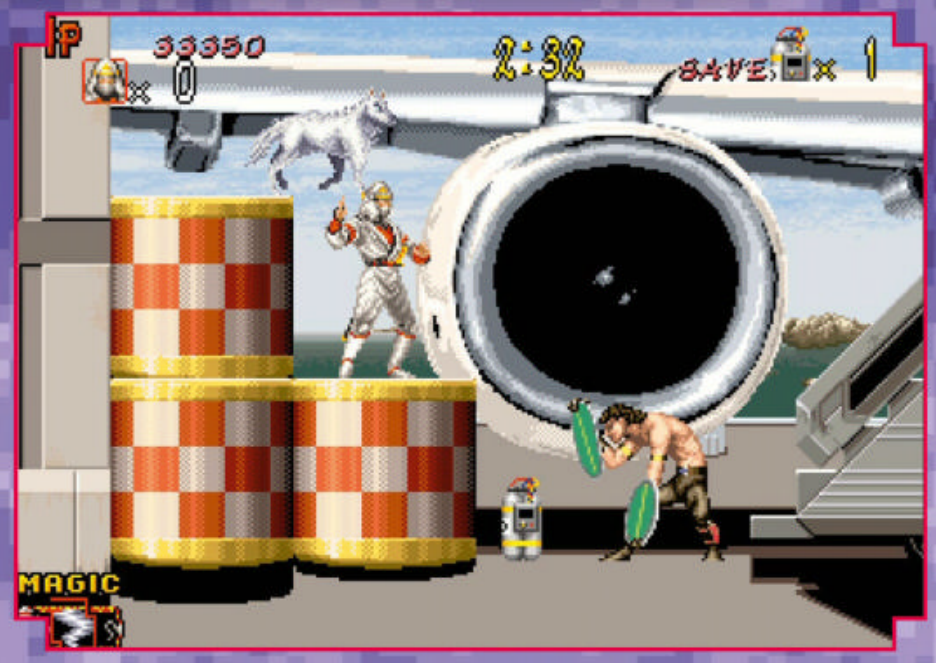
It's dog-eat-terrorist in this sequel to Sega's incredibly popular 1987 hit Shinobi. Whistle for your faithful hound and ready those shurikens, as it's time to disable a set of deadly bombs scattered throughout the city, and eliminate the nefarious organisation that is placing them

Words by Graeme Mason

The arcades were a brutal battleground back in 1987 as machine after machine begged for the coins from your pocket. Lurking in the corner, bathed in shadows, was Sega's *Shinobi*, and it was the breakout hit of the year, instigating a franchise that continues to enthral fans today. *Shinobi* introduced the world to the masked hero Joe Musashi, legendary ninja and teacher, on his mission to stop the terrorist organisation Zeed. The success of the game ensured multiple appearances on home computers and consoles, plus the inevitable continuation of the series in arcades. Yet while 1989's *Shadow Dancer* is the true sequel to *Shinobi*, the game strangely diverts away from its predecessor in terms of storyline. Starring an unnamed ninja and his pet dog, there's another bunch of terrorists threatening freedom, while it was nameless in the arcades, according to some home versions this organisation was called Asian Dawn. Someone at Sega, like *Die Hard*'s Hans Gruber, obviously reads *Time* magazine.

The gameplay to *Shadow Dancer* closely follows the template laid down by *Shinobi* two years earlier, itself owing a debt to Namco's spy thriller *Rolling Thunder*. The notably visible star (contrary to his ethereal moniker) strides from the left to the right of the screen, jumping over obstructions and athletically leaping on to the platforms above or below. From every angle the enemy terrorists attack the hero, and there's a huge variety within this terrorist organisation as multicoloured ninjas wield dual swords, and thugs fling knives across the screen or simply run up to the shinobi, razor-sharp blade held aloft. Some unarmed enemies use their fists and feet to batter the player, while others are equipped with shotguns, often lying prone to shoot at your feet, the cads. But that's not all: Looking like a cross between a WWE wrestler and Patrick Swayze, with his long wavy hair and bare chest, another enemy possesses twin ▶

» [Arcade] An old friend pokes its pointy nose out at the airport.



» [Arcade] Watch where you step here – remember that first episode of *Lost*?

THE SHINOBI

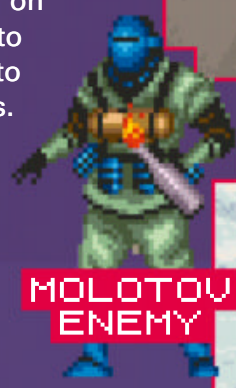
PRONE ENEMY

green discs which he uses to deflect incoming shurikens and chuck at the shinobi. And by the time you make your way to the enemy's underground base, even estranged crocodiles attack the player, slavering jaws yearning for some nice juicy ninja flesh.

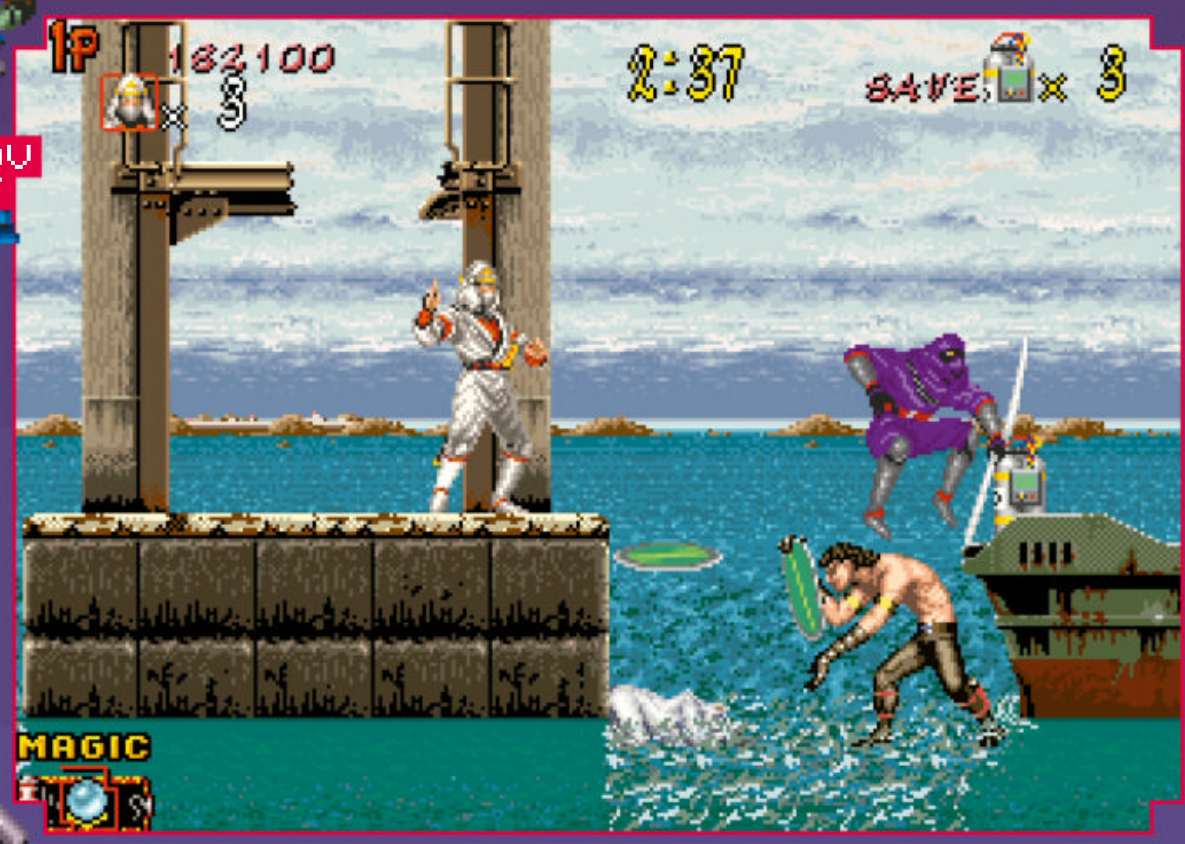
As in *Shinobi*, the star of *Shadow Dancer* retains an infinite supply of shurikens, of which he can hurl in volleys of up to four at a time, and for when enemies get too close for comfort, he efficiently flashes his narrow blade instead. The game's upright cabinet holds a central joystick and three buttons, for jump, attack and magic, with a corresponding set of buttons on the opposite side. Pressing up or down on the joystick and jump causes the ninja to spring to another level, often required to reach certain opponents and objectives. The yellow magic button unleashes the ninja's special attack, wiping out minor henchmen or sapping the power bar of the end-of-level bosses. Sadly it's only available once per section, and best saved for those powerful boss villains. The game itself was developed on Sega's new System 18 board, an improved version of the System 16 board that includes enhanced sound and graphics capabilities.

Yet despite magical powers, a deadly sword and infinite shurikens, this ninja's greatest asset is his loyal pet dog – of indeterminate breed, but looking like a snowy German Shepherd – and a ferocious ally, even in the face of well-armed enemies. Should this furry friend spot a villain, it lets out a sharp bark. The shinobi can now crouch and press fire, sending the dog off to restrain the ruffian in question. Once its jaws are locked and the enemy is duly incapacitated, the player has a limited time to fling a shuriken before the

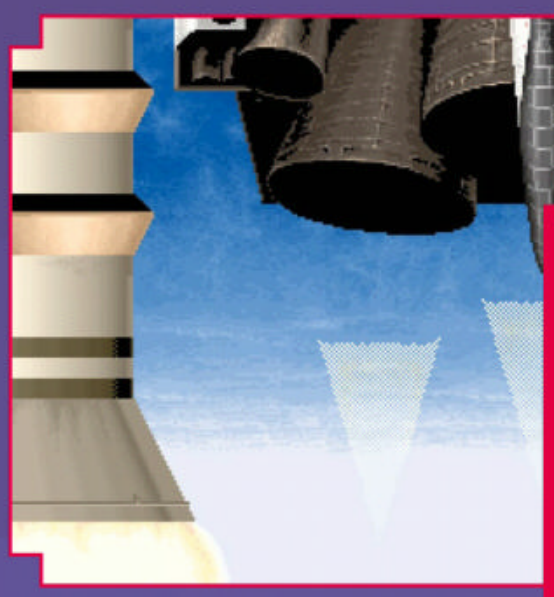
» [Arcade] Let a ninja get too close to you and this minigame is over.



MOLOTOV ENEMY



» [Arcade] This frisbee-wielding baddie has clearly been watching *Hard Ticket To Hawaii*.

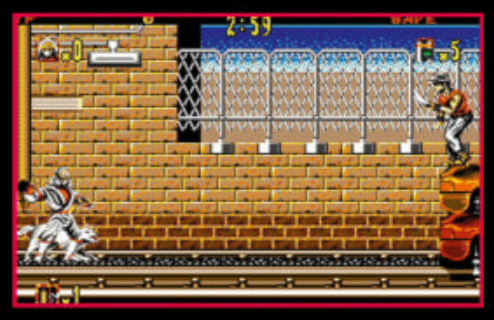


» [Arcade] With the enemies vanquished, the space shuttle takes off unhindered.

CANINE FRIEND

DOG ATTACK

CONVERSION CAPERS



AMIGA

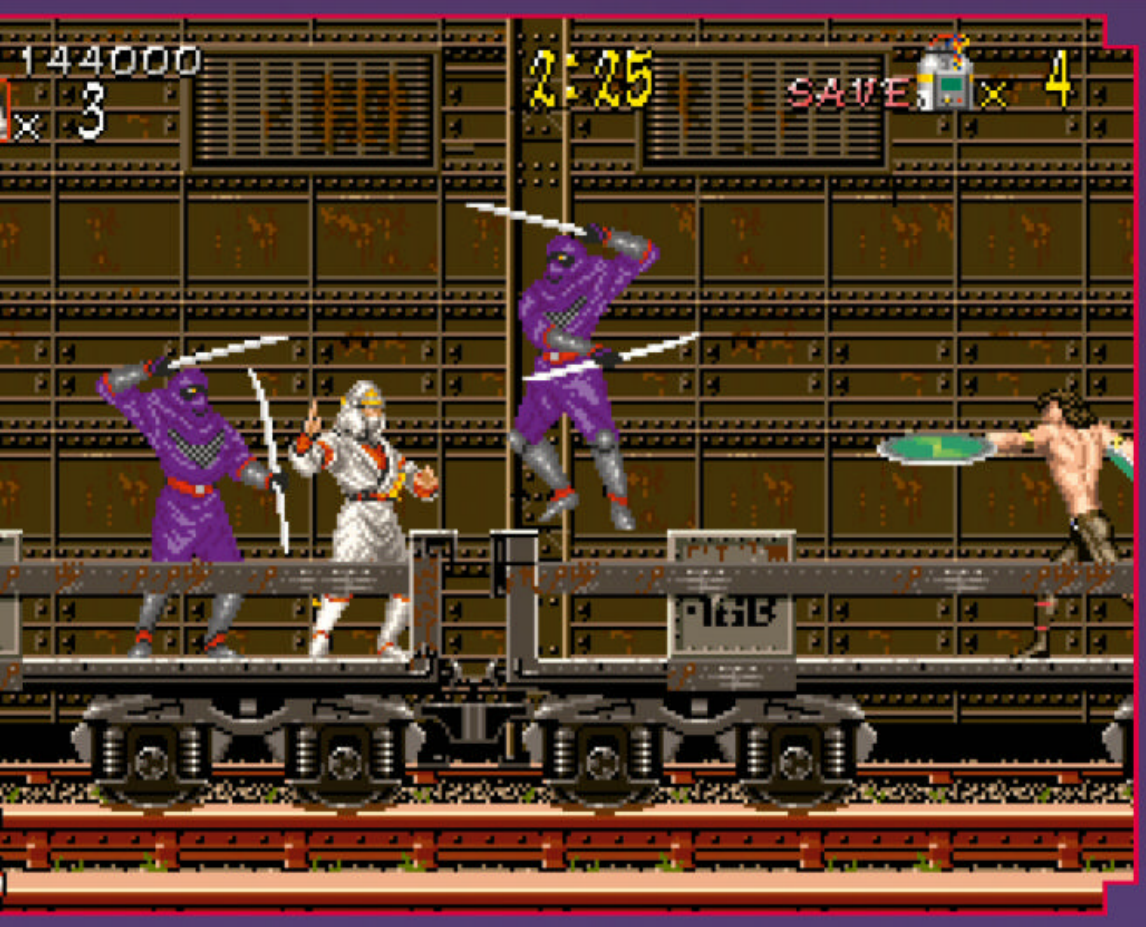
We may have been a bit harsh on US Gold's 16-bit arcade conversions in the past, but it's a reputation it unfortunately often deserves. Credit where it's due, however: this port of *Shadow Dancer* is an excellent conversion, even boasting better music than the arcade original. This was inevitably ported from the Atari ST version, yet improved thanks to its sharper graphics and enhanced audio.

ATARI ST

Like the Amiga port from this base game, this is a decent effort at recreating the Sega arcade game, two years after its original release. There are plenty of big and bold sprites on display and the gameplay is suitably frantic and tough – *very* tough in places. Overall, despite some choppy sound, this is a well-rounded conversion. Curiously, both 16-bit versions lack the cool two-layer scrolling of the original.

COMMODORE 64

While most probably edging the 8-bit home computer versions, the Commodore 64's *Shadow Dancer* moves at a slower pace, and it has some respawning enemy issues that ramp up its frustration factor. Otherwise, it's a decent port, and the first-person shuriken minigames are particularly fast and pleasing.



» [Arcade] Things are heating up here as the shinobi endures second-class train travel.

Q&A DAVE SEMMENS

SHURIKEN

The coder behind the ZX Spectrum and Amstrad ports of Shadow Dancer takes us behind the scenes

How did you come to work on *Shadow Dancer* and who did you work with?

Images Ltd contracted me to do both the ZX Spectrum and Amstrad versions. I was the main programmer and there was an artist, Doug Townsley, and a sound person.

Were you familiar with *Shadow Dancer*?

I had never played or seen the game before taking the contract! I got to play it at the Images offices for the first time when I went down there, and I was also given a VHS video of the entire gameplay. I only actually played through the game once. We never got any code for any game I ever worked on, and after that one play of the game, I only had the video for reference.

It was quite a complex game to squeeze into the ZX Spectrum in particular, and the extra on-screen protagonist couldn't have helped...

One big difficulty was storing enough animations. The human characters were broken down into legs, body and heads so they could be mixed and matched to give some variety. Then we did not get as many animations in as we would have liked for the dog. It was very tricky fitting all the graphics in, but that was standard issue on the Spectrum. The other problem was leaving the dog behind in the level, from my memory that was a right pain to deal with. Controlling the super jump also gave me a few headaches.

It's a very commendable effort at squeezing the arcade game into the Spectrum – were you pleased with the final game and its review scores?

Yes, I think we came up with a very playable version, with all the levels and end bosses covered. We even managed to get some parallax scrolling effects in to add a bit of sparkle.

I would always take quite a bit of notice of reviews as it was a critique on my own work really. It would also help me get future work if the games I worked on scored highly.

AMSTRAD CPC

A port of the Spectrum game, this version adds more colour and sound but at a reduced speed, purging much of the fun from the action. Nevertheless, like its other conversions, Amstrad *Shadow Dancer* at least shows a level of care and skill by its creators, raising it comfortably above many of its US Gold peers.

MASTER SYSTEM

Unlike its Mega Drive counterpart, this Master System game is a 'mere' port of the arcade original, with a few sacrifices to the inferior technology. The biggest difference is the lack of the shinobi's faithful hound on-screen, although it can still be called upon during hectic battles to attack any hard-to-reach enemies.

ZX SPECTRUM

While visually the poorest of all conversions (despite a sharp resolution, it's stoically two-tone as with many Spectrum arcade ports), this is an ambitious attempt to bring the multiplatform game to the Sinclair computer. Predictably, there is little sound and backgrounds are simplified, but it plays briskly and even retains the first-person shuriken minigames.

MEGA DRIVE

Subtitled *The Secret Of Shinobi*, *Shadow Dancer* is one of a select handful of Mega Drive arcade conversions that are either completely different or add significant extras (much like with *ESWAT* and *Gauntlet IV*) – although it's arguably not even a conversion, considering the difference in levels. With the player taking on the role of either Joe or his son, Hayate – depending on your region – there are new levels, enemies, music and bosses in this excellent Mega Drive sequel to the similarly brilliant *The Revenge Of Shinobi*.

RUNNING THE GAUNTLET

We break down Shadow Dancer's levels

MISSION 1

■ Terrorists, bombs and an airport are not a great mix, and there's little sign of security here as the bad guys constantly accost the player through departure lounges, the tarmac and eventually the hold of a cargo plane. There are some notable iconic images in the background, including an elegant Concorde, sitting on the runway, ready for futuristic supersonic flight. It's not only a great way to introduce the enemies of the game, but also allows you to discover just how useful your canine companion is.

MISSION 2

■ It's time to hit the enemy where it hurts and take out their precious supply route! Having escaped the heavily armoured airport, the ninja follows the enemy trail to a nearby junk and train yard. Leaping across trashed Lamborghinis and over steel fences, the pair are set upon by enemies both old and new, before boarding a train and negotiating the many multiple levels of the docks. Fortunately the water's not too deep!

MISSION 3

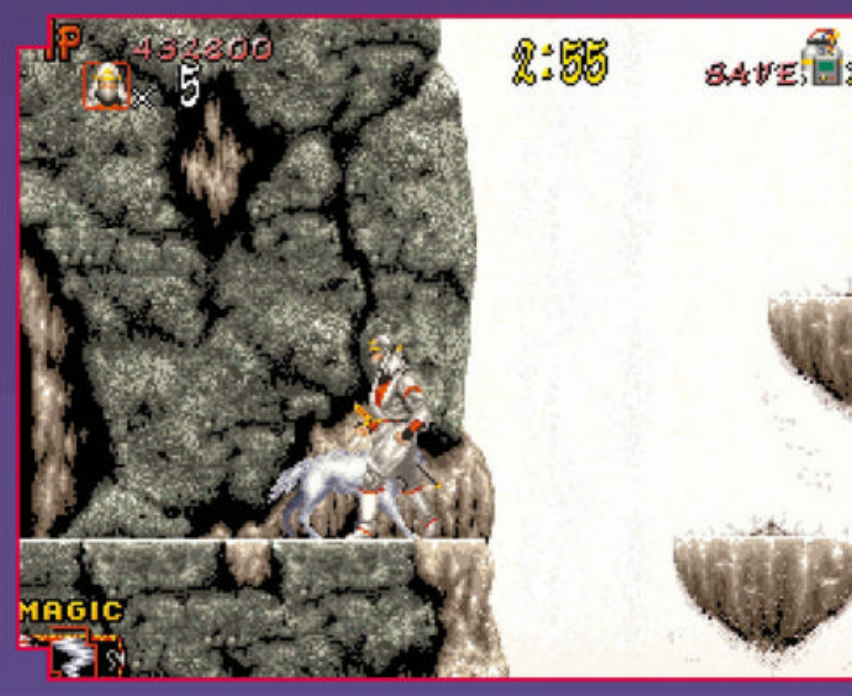
■ Next it is into the enemy's base itself and here the action really begins to heat up. Your journey will see you venturing across an abandoned factory (where the enemy has bizarrely left more bombs), into the building itself, before descending into the icky brown sewers, complete with giant mutated crocodiles. Tread carefully through these sections and make sure you use your faithful hound to the best of its abilities.

MISSION 4

■ Stalagmites and stalactites pepper the underground tunnels where the ninja and his dog now find themselves as they seek to halt the enemy plan before it's too late. The dank tunnel leads to a cascading waterfall, the Space Shuttle installation before onto the shuttle itself and the final showdown with the terrorist leader. The enemies come thick and fast here so be prepared.

hound is shaken off and shrunk back to a pup, of little use for the rest of the level, or until a bomb is deactivated. Said deactivation also sometimes upgrades the shurikens, adding flame and power to their effect, a handy improvement when faced with enemies that are able to repel the throwing stars or are immune to the dog's attacks. Once all the bombs from a level are collected, the exit to the next scene appears.

***Shadow Dancer* takes place over four different stages, each with either three or four areas within.** Progress is marked between each area with a photo map, complete with a glowing green line marking the route to take. The mission begins in the terminal of an airport; once secured it's out onto the runway with numerous passenger jets providing the striking background. Stage two follows the terrorist supply line across a junk and train yard, before an abandoned factory and crocodile-infested (or are they alligators? We can never tell the difference...) sewer awaits the ninja. Make it through all that and your final destination is the space port, where the evil extremists have some diabolical fate in store for the waiting space shuttle. With only three lives, no energy bar and a high difficulty level, even these short stages will take



» [Arcade] Some of the levels are more than a little evocative of *The Revenge Of Shinobi*.

» [Arcade] Mission accomplished! Time to pose for the camera.

» [Arcade] Little ninjas repelled, it's time to take on the final boss.

some practice. Fortunately, the player has the opportunity to gain extra lives with a dramatic and exciting minigame that appears between each section. In a first-person view, the player looks up towards a high tower as enemy ninjas quickly descend level by level. Despatch them all with your shurikens and there's a special bonus life awaiting you; miss just one bad guy and it's a swift kick in the face, and off to the next mission.

As with the first game, *Shadow Dancer* received a healthy array of home ports, most of them credible efforts in recreating the arcade game. The 16-bit versions are the most faithful, with the Mega Drive's version different enough to perhaps even be called a remake. Having already been treated to semi-sequel exclusive, *The Revenge Of Shinobi*, the same year as *Shadow Dancer* hit arcades, the console received *Shadow Dancer: The Secret Of Shinobi* in 1990. While its gameplay mechanics are largely the same, the backdrops to *Secret Of Shinobi* is significantly different from the arcade machine it is supposedly imitating. An extra mission, alternate minigames, hidden bonuses and different enemies all add up to a pleasing supplementary chapter in the story of *Shadow Dancer*, the ninja who doesn't so much as dance in the shadows as parade in broad daylight, bravely fronting up and destroying those who oppose him. ✱

BOSS RUSH

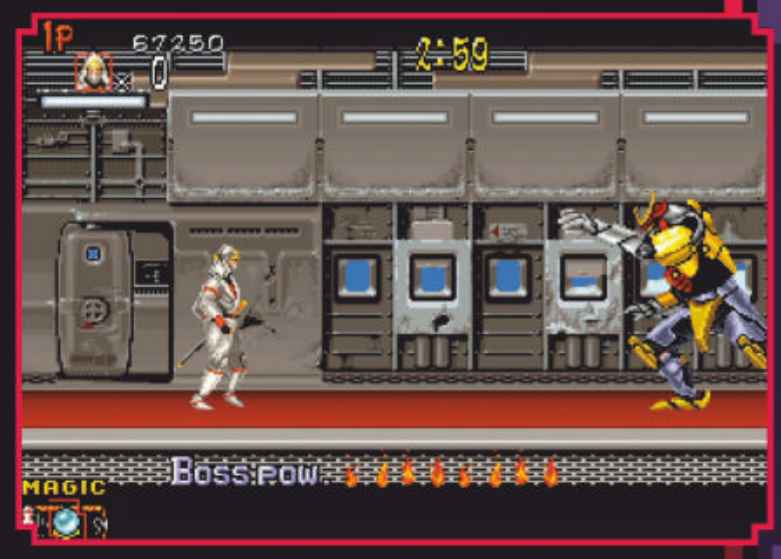
How to overcome Shadow Dancer's end-of-level supervillains

LEVEL 1-3 BOSS

■ Fans of the Mega Drive semi-sequel *The Revenge Of Shinobi* will be familiar with this heavily armoured chap. He's slow, but lobs lethal glowing balls at the brave ninja.

HOW TO BEAT

■ Quite simply, actually, given this first boss only has two types of attack, high and low bouncing balls. They are easily dodged while you let shurikens fly at his vulnerable arms and head.



LEVEL 2-4 BOSS

■ Bosses don't come much sturdier than this, a massive locomotive, charging towards the player while hurling fireballs in their general direction. Maybe British Rail wasn't that bad after all.

HOW TO BEAT

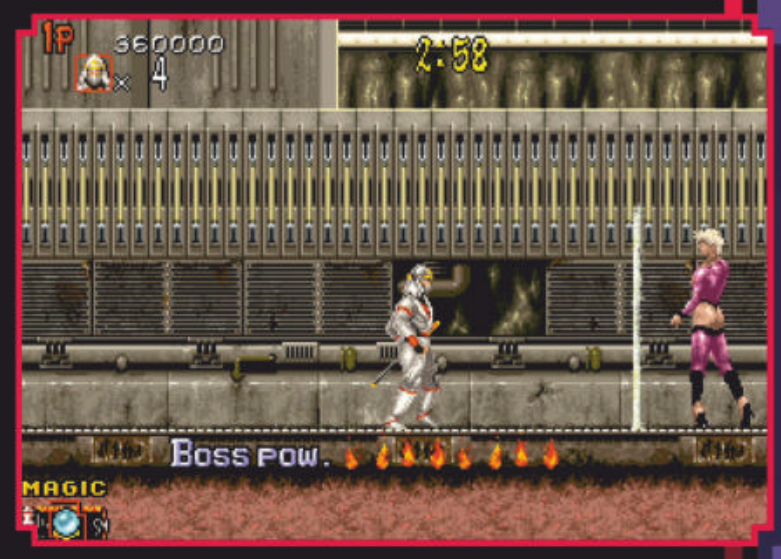
■ This level is quite elongated, so make use of the room to your left to help dodge the train's deadly fire. You need to hit the moving headlight a handful of times, after which it helpfully explodes.

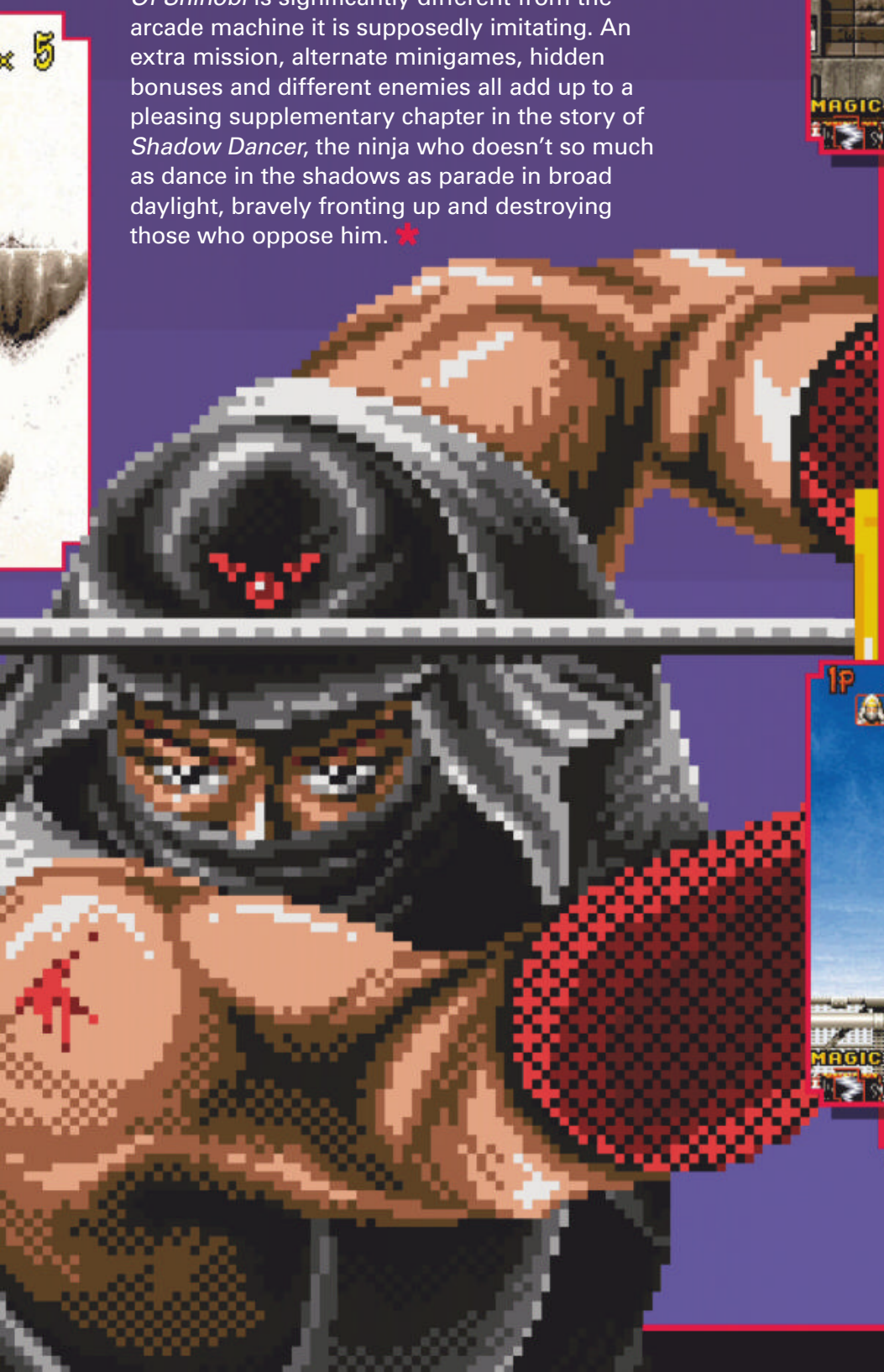
LEVEL 3-4 BOSS

■ This blonde-haired female warrior hurls massive segments of the background at the hero (which circle around and drop down on them) and hides behind a powerful tall shield.

HOW TO BEAT

■ You can get a sneaky hit early if you dare get close to her shield. After that it's time to duck and jump the deadly projectiles, timing your shurikens as her guard drops to throw them.





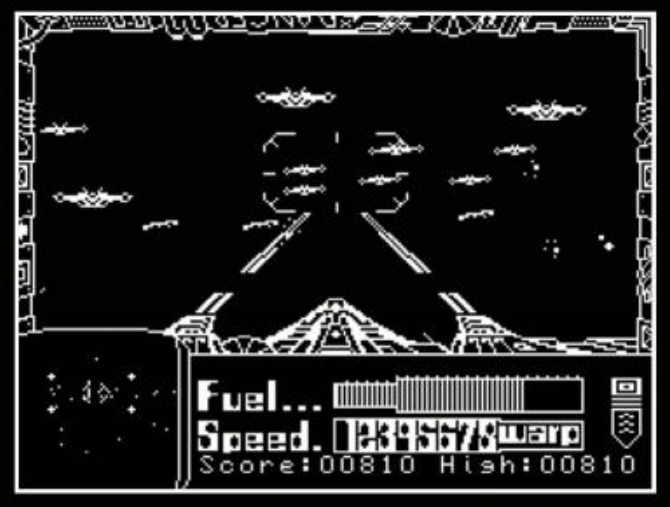
LEVEL 4-4 FINAL BOSS

■ Surrounded by a multicoloured circle, this final master of the terrorist clan lets loose flying mini-ninjas who must be defeated before you can have a crack at the boss herself.

HOW TO BEAT

■ Stay low and fling shurikens to prevent the little ninjas escaping into the air. The main boss has a long pike which deflects the missiles, but she can be worn down relatively easily when her guard drops. A spare magic boost always comes in handy.

» [Dragon 32] The Dragon version of *3D Space Wars* depicts damage to the player's ship with an electric discharge effect.



» [Dragon 32] Some Seiddab ships in the Dragon *3D Space Wars* bank right as they come into view.

THE MAKING OF

3D SPACE WARS

While transitioning from commercial coding to games development, Steve Turner looked to the arcades for inspiration. Steve tells Retro Gamer how he reimagined Galaxian in three dimensions with his debut title, 3D Space Wars

Words by Rory Milne

IN THE KNOW

- **PUBLISHER:** HEWSON CONSULTANTS
- **DEVELOPER:** STEVE TURNER
- **RELEASED:** 1983
- **PLATFORM:** ZX SPECTRUM, DRAGON 32
- **GENRE:** SPACE SIM

By the early Eighties, a decent living could be made from making computer games, and although commercial programmer Steve Turner didn't immediately leave his salaried job when he found this out, he did commit his spare time to testing the waters. The fledgling game developer's first project was influenced by popular coin-ops of the early Eighties, with the twist being that it would be depicted in 3D. "I liked shoot-'em-ups in the arcades, so games like *Galaxian* were my influences," Steve remembers, "but I thought it would be good if the aliens came at you, rather than just being on a flat screen. It was something that I hadn't seen done well on home computers, so I thought that if I could do that it would make the game stand out."

Rather than having a crosshair drifting around a naked screen, Steve opted to give players a pilot's eye view of their alien opponents, whose weapon referenced a popular movie. "I thought to really show off the 3D I'd have a frame of the cockpit and the laser guns receding into the distance," Steve enthuses, "and then have the enemies getting bigger as they came towards you, firing bolts that got really big. The bolts were inspired by the first *Star Trek* film, where there was a 'Vega device,' and it fired these 'fuzz balls' – that's what I used to call them! I thought those were terrific, and that they would be fairly easy to do."

A second *Star Trek* influence followed, as Steve tried out ideas for enemy ship designs, although his first concept was a little less high tech. "I remember one of my early designs looked like a zeppelin," Steve recalls, "but that just didn't work, so it was replaced by a ship that was like a little bar with wings at the ends. That was loosely inspired by the Klingon vessels, because I thought they looked really nice when they were head-on."

Having designed opponents for his game's opening level, Steve next defined their attack manoeuvres within the limited memory that he had to work with. "I tweaked the ships' movements to match their size," Steve notes. "The first wave was the first one I put in, and I always intended them to

DEVELOPER HIGHLIGHTS

3D SPACE WARS
SYSTEM: ZX SPECTRUM, DRAGON 32
YEAR: 1983

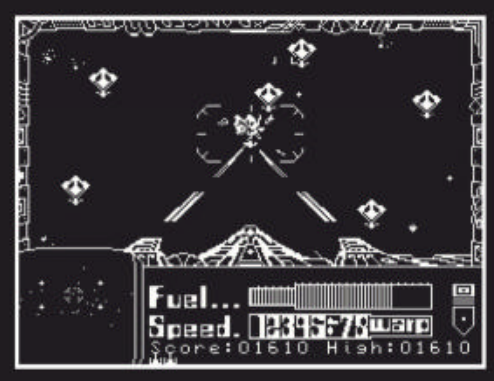
3D SEIDDAB ATTACK
SYSTEM: ZX SPECTRUM, DRAGON 32
YEAR: 1984

3D LUNATTACK (PICTURED)
SYSTEM: ZX SPECTRUM, DRAGON 32, C64
YEAR: 1984

» [ZX Spectrum] The Seiddabs keep their distance until spotted and then attack all guns blazing.

» [ZX Spectrum] *3D Space Wars* begins with a sighting of far-off Seiddabs massed on the horizon.

» [ZX Spectrum] Formations of Seiddabs can rapidly deplete your ship's fuel supply.



» [Dragon 32] The Seiddabs in the Dragon *3D Space Wars* were designed specifically for this version.

come in and then sweep sideways. But because it was a 16K game I just had no room for graphics whatsoever, so I had to pare everything down to the minimum."

Another aspect of Steve's project that was limited by memory was the manoeuvrability of the player's ship, but he made sure that it could accelerate and decelerate. "I wanted to make it feel like you had control, and it gave you the possibility of quickly flying away from the Seiddab [ships]," Steve reasons. "Also, I thought I would need to put something in just because I couldn't have rotation – I thought that would really slow the machine down. So I just put in the controls that I thought would work, and that was another reason why I included speed controls."

In order to reconcile this speed advantage, however, Steve added a fuel gauge to the recently dubbed *3D Space Wars*, which emptied faster at top speed and depleted further when the player fired their weapon or took hits from the enemy. "Basically your fuel supply was also your 'life,'" Steve reasons. "I didn't want too many things that you had to look at; I wanted one main meter. I suppose your time limit in *3D Space Wars* was that you were running out of fuel all of the time, so you had to get to the satellite to refuel before you ran out."

Soon after its completion, Steve's *3D Space Wars* was released, and it sold so well that on hiring his first employee Steve asked him to develop a conversion.

"When Andrew Braybrook did the Dragon *3D Space Wars* he could afford more frames," Steve recollects, "and he put lovely explosions in. It had no colour, Andrew just went for the high-res two-colour mode, but that allowed him to have lovely graphics, so I always say that the Dragon version is the definitive version."

Reflecting on his own *3D Space Wars*, Steve focuses on a single failing that was improved on by Andrew's conversion, but he saves his final words to praise the original's gameplay. "I always wished I had put proper explosions in mine," the developer sighs, "but I was really fighting for bytes at the end. Other than that, I'm quite pleased with how well *3D Space Wars* plays." ✱

» Steve Turner got his career in games development off to a great start with *3D Space Wars*.

SPECTRUM VS DRAGON

ZX Spectrum

The ZX Spectrum original's colourful cockpit sits under a monochrome playfield, although this cycles through different hues as you play through the levels. The first three of these feature different Seiddab ships, which make return visits from level four onwards. The game suffers from slowdown at the start of each stage due to the Seiddabs appearing en masse, but it speeds up when they disperse. Audio is mainly limited to laser fire, but that sounds great.

Dragon 32

Although faithful to the original, the Dragon conversion is greatly enhanced. It adds an impressive animated intro, showing your ship blasting off into the opening stage, where you immediately notice how much faster the game is than its ZX Spectrum counterpart. There are four Seiddab ships to the original's three, and these are more detailed, as are its viewscreen and refuelling station. It also sounds better. The only real minus is that it's mainly in black and white.

THE MAKING OF

BLACKTHORNE

GUIDED BY DEVELOPERS MATT FINDLEY AND STU ROSE, WE JUMP INTO BIZZARD'S ALL-ACTION CINEMATIC PLATFORMER

Words by Robert Zak

» [SNES] The different colours of orc corresponded to how rapidly they fired their weapons at you.

» [32X] The 32X version introduced a snow world made up of four new levels.

Flanked by two shotgun-toting orcs, you grit your teeth and slam your back against the wall, slinking into the shadows as bullets fizz past and spatter little pixel debris off the wall. Right after the shooting subsides, you jump out and blow one of the orcs away with a double shotgun blast.

Meanwhile, the orc behind you has reloaded his weapon and grins with violent idiocy as he prepares to fire again. With no time to turn around and face the threat, you, Kyle Blackthorne, do what quite possibly no videogame character has ever done before: without looking, you straighten your arm *behind you* and shoot the other orc in the chest, sending him crumpling in a puddle of censor-friendly green gunk.

Blizzard's cinematic platformer *Blackthorne* was made during relatively simple times; a time when a premise like '*Prince Of Persia* with guns and a no-look shot' and a talented development team was all the incentive needed to sell a project.

Founded in 1991, Silicon & Synapse (which became Chaos Studios in 1993, then Blizzard Entertainment in March 1994) was a small studio churning out ports to stay afloat. The workload was intense, but the studio had a good gig making ports for publisher Interplay. So when Mike Morhaime and Allen Adham pitched a bundle of four games to Interplay in late 1991, the publisher snapped them up. These games were *RPM Racing*, *Rock N' Roll Racing*, *The Lost Vikings*, and *Blackthorne*.

Matt Findley was a producer at Interplay at the time, and is astonished when looking back at the vague contract for *Blackthorne* – originally called '*Nightmare*'. "These contracts don't even say anything," he says. "I'm looking at the 'Definition Of Product' for this game and it says: 'The product shall be defined as a computer software game known as *Nightmare* which shall operate on the Super Nintendo Videogame System.' Back in those days deals were way closer to handshakes."

With just the '*Nightmare*' title as a foundation, Blizzard got its hands on the code for seminal survival horror game *Alone In The Dark* and began to work on a SNES game using vector graphics. As Blizzard artist Stu Rose recalls, the team was far too ambitious. "We got it all together and realised we could only get like four scenes into the game because of the cartridge size. It just wasn't going to work", he says. "So we had a contract slot to fill and thought, 'Good god, what do we do now?'"

IN THE KNOW

» **PUBLISHER:** INTERPLAY

» **DEVELOPER:** BLIZZARD ENTERTAINMENT

» **RELEASED:** 1994

» **PLATFORM:** SNES, PC, 32X, MAC, GBA

» **GENRE:** PLATFORMER

Blackthorne's team had a few obsessions at the time. *Magic: The Gathering* was ritually played during lunch breaks, and there was a Neo-Geo constantly running *Samurai Shodown* in the corner of the office. More importantly, *Prince Of Persia* had been ported to the SNES in 1992, reinvigorating the legendary cinematic platformer for the modern generation. It captured the team's imagination.

"It was definitely a big influence," Stu recalls. "Mostly it wasn't a business decision. During those early days it was 'What game would we like to play?' That was pretty much the design document. We had a quick 'e-meeting' – scrum, break and everyone ran off to their respective areas to do it."

Different members of the team pitched in with ideas. Stu came up with the doorways being portals to new areas, and Ron Millar conceived the no-look shot mechanic. Matt Findley was an instant fan. "The real hook was that no-look backwards shot. It really came down to that one thing. The innovative mechanic was hiding in shadows, but if you put no-look shooting on a *Prince Of Persia*-style game, that's the end of the pitch!"

Ironically, there weren't that many opportunities to use the no-look shot in

» [32X] In the 32X version, the new 3D model for Kyle had a rather over-inflated chest, and the backgrounds in the mines lost their sparkle.

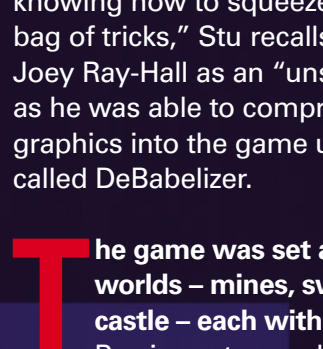
Blackthorne. Its animation took a little longer than a regular shot, and scenarios where you were surrounded by enemies weren't that common. The easiest targets for the no-look shot were the human captives chained up throughout the levels. With no consequence for killing them and little other outlet for the most badass shooting mechanic of the early Nineties, what was a gamer to do?

But there was more to *Blackthorne* than just its mechanics. From the character animations to backgrounds, to little details like flying bullet shells and debris spraying off walls, it looked fantastic. It benefited from being made in the later days of the SNES lifecycle, and the fact that Blizzard had plenty of experience with the console by that point. "From an art side, it helped knowing how to squeeze more stuff into a small bag of tricks," Stu recalls. He praises fellow artist Joey Ray-Hall as an "unsung hero of production", as he was able to compress a huge number of graphics into the game using an image editor called DeBabelizer.

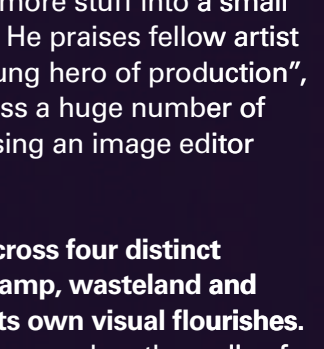
The game was set across four distinct worlds – mines, swamp, wasteland and castle – each with its own visual flourishes. Precious stones glimmered on the walls of the mines, while shrubs trembled beneath the high winds and lightning of the wasteland, where an unknown city loomed in the background. The swamp world was the most evocative, with a great sense of depth as rain poured in the foreground, and murky trees stretched off into the green mist of the parallax backgrounds.

"In DPaint at that time, you had to set up your own palette progressions," Stu remembers. "Break down the 256 colours and go, 'Okay, rocks and beams. I'm gonna get 16 colours here and 16 colours there. I think even the characters had a share of that."

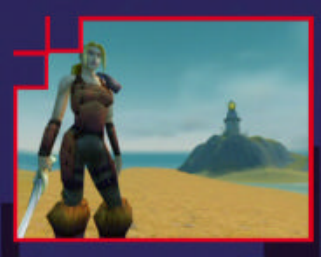
Blackthorne's aesthetic also marked the onset of a distinct art style at Blizzard – one that would evolve in games like *Warcraft* ▶



» Matt Findley wrote the story for *Blackthorne* deep into development.



» Stu Rose worked on *Blackthorne* as an artist.



DEVELOPER HIGHLIGHTS

THE LOST VIKINGS
SYSTEM: VARIOUS
YEAR: 1992

STARCRAFT
SYSTEM: PC, MAC
YEAR: 1998

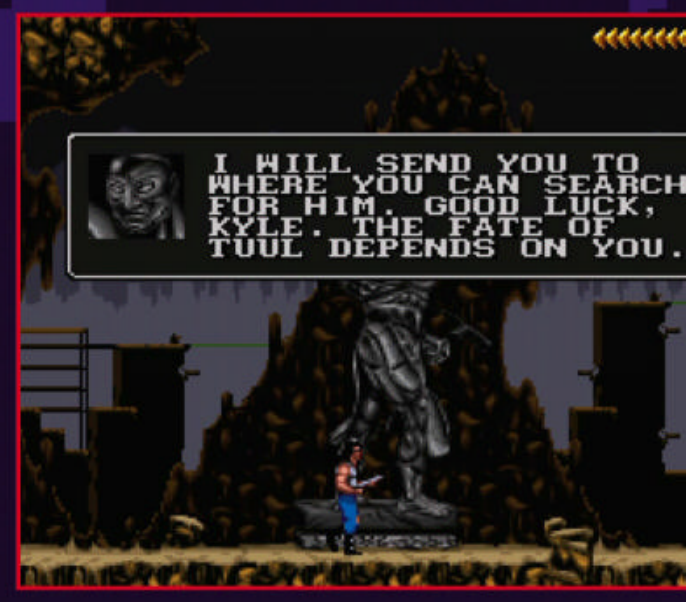
WORLD OF WARCRAFT
(PICTURED)
SYSTEM: PC, MAC
YEAR: 2004

» [SNES] Many encounters were essentially puzzles, designed around the explosive weapons you collected along the way.

» [SNES] Bridge keys and levitation devices are two of the key items required to solve *Blackthorne*'s puzzles.

» [SNES] Exploding wasps were a nuisance to fight against, but you can use them as remote control bombs.

» [SNES] Meet Sarlac, your typical demonic warlord and the nemesis of our hero.

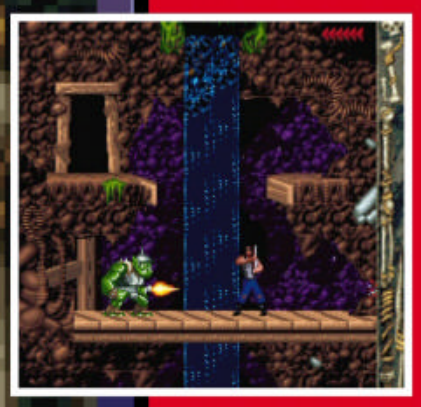


» [SNES] The trick to defeating the formidable rock beasts was to hide in cover until they stopped rolling.

CONVERSION CAPERS

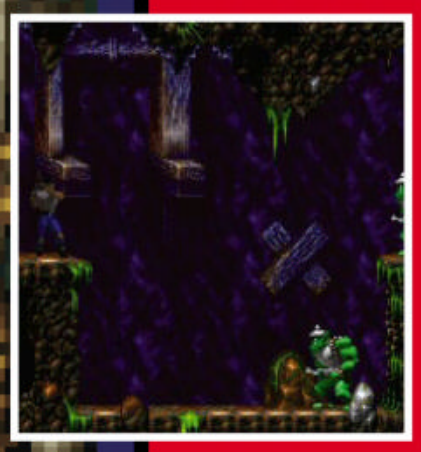
SNES (1994)

The original version of *Blackthorne* was also the most censored. All blood in the game is green, there are no visible bullet wounds on enemies or Blackthorne, and no blood splatters on walls. In the Japanese version, you couldn't even shoot captives.



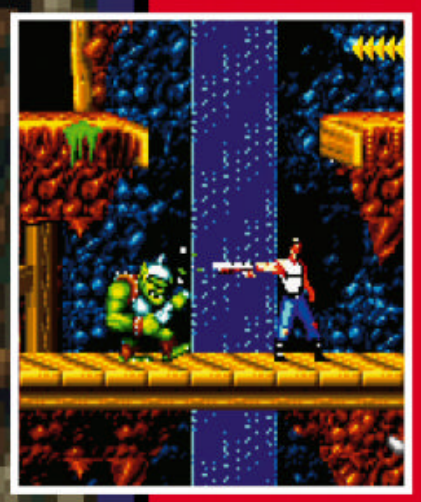
PC (1994)

The DOS version of *Blackthorne* had a revamped soundtrack and red blood (complete with wall splatters) in place of the SNES version's green gunk. In true PC fashion, it also took advantage of the higher resolution to chuck in a clunky UI that hogged a large portion of the screen.



SEGA 32X (1995)

The Mega Drive was pretty old news by 1995, so Interplay ported *Blackthorne* to the ill-fated 32X instead. It had a complete visual revamp, with new 3D character models and some pretty-looking backgrounds. A new snow-themed world was added, too.



GAME BOY ADVANCE (2003)

The last *Blackthorne* port to be released, the Game Boy Advance version was based on the SNES one, and featured a notably more saturated colour palette than its predecessors. Scrolling was used to make up for the small screen size, and it was the first version of the game to use save slots.

and *Diablo*. You can see this not only in the earthy colour palette, but the orc design, which is almost identical to the now-famous *Warcraft* orc. "We were all learning from each other, so it was becoming *our* drawing style," says Stu.

True to its cinematic platformer contemporaries, *Blackthorne* used rotoscoping to animate its titular character. The technique involved motion capturing an actor, then whittling down their movements to however many frames per second a given console could handle. It was, in fact, Blizzard cofounder (and recent alumni) Frank Pierce who provided the movements for *Blackthorne*.

"I took Frank out to a park playground and videotaped him with my camera jumping and ducking on a jungle gym. I think I had something stupid like a yardstick and told him 'Okay, this is the gun. Now fire it!'" Stu says. "The results were amazing. My only regret is when the other artist reworked the hair, he shifted the character's position slightly in a few frames, destroying some of that fluidity."

Blackthorne may have come in the wake of classics like *Another World* (1991) and *Flashback* (1992), but it also showcased Blizzard's own talents. The level and puzzle designs worked together brilliantly, as you'd use items like grenades, keys and remote control exploding wasps to progress through the game.

On the first swamp level, for instance, a character tells you that you can 'use a Levitator to get some wasps'. It means nothing at first, but you may just get a flashback to that conversation when you encounter a wasp enemy a short while later, hovering near a purple orc that's well out of reach. You kill the wasp, and move on.

When you get the Levitator even later in the level, recalling that conversation should help you join the dots and return to that purple orc, who you can now reach using the Levitator, and kill for his wasp bombs. It's satisfying design that, along with the bodies you'd leave in your path, helped you navigate the sprawling levels without the need for a map.

Blackthorne's development went smoothly, with Interplay happy to leave most of the process in Blizzard's hands. "They were just building it and sending versions of the game to Brian Fargo to check out," Matt recalls. "At some point we realised that maybe someone should be paying attention to this thing."

Matt got directly involved with *Blackthorne* when he was asked to write the manual later in development, which inadvertently led to him writing the story. With Blizzard focused more on mechanics than plot, Matt had plenty of freedom to get creative. He recalls, "The game was playable pretty much from start to finish, but

» [SNES] The slow step-based controls turned the final showdown with Sarlac into a particularly gruelling encounter.

"I took Frank out to a park playground and videotaped him with my camera jumping and ducking on a jungle gym"

STU ROSE

there was no story, no background, the character didn't even have a name."

With several pages of a game manual to fill, Matt fudged together a backstory for *Blackthorne*. "If you read it all [in the manual], it's like a weird hybrid between *Lord Of The Rings* and *Conan The Barbarian*," he says. This can partly be explained by the fact that Matt was also working on Interplay's *Lord Of The Rings* SNES game at the time, and admits that being absorbed in Tolkien's mythos inspired the surprisingly sweeping backstory.

Blackthorne's near-biblical tale involves a distant planet called Tuul, where a powerful shaman turns himself into two stones – light and dark. His two sons take a stone each, and use them to form a 'light' kingdom (Androth) and a 'dark' kingdom (Ka'dra'suul). When Sarlac, warlord of the dark kingdom, invades Androth, its ruler Vlaros saves his son Kyle (Blackthorne) by sending him to Earth. Years later, grizzled from military service, mercenary work and assorted action hero badassery, Blackthorne returns to Tuul – shotgun in hand – to reclaim the kingdom in his father's name. "I was a real horrible writer – I think that's the moral of the story," Matt concludes.

Much like the story, the game's name came late in development. Interplay's marketing team came up with *Blackthorne*, but this ran into problems in the UK. "We realised we couldn't launch with that name in the UK because of Blackthorn Cider, so we called it *Blackhawk* in Europe."

Blackthorne launched in September 1994 for the SNES, embellished by stunning cover art drawn by legendary DC Comics artist Jim Lee. "That piece is just unbelievable," Matt recalls. "That's the most expensive box art we created in that whole era."

The game was a success on the SNES, though Interplay's decision to port it to Sega's 32X Mega Drive add-on in 1995, instead of the Sega Saturn or seismically more popular PlayStation, put paid to any future instalments of a possible *Blackthorne* franchise. By that time, Blizzard had also moved onto its own projects, making and self-publishing *Warcraft* the previous year. "We very much wanted to do more *Blackthorne* games, but at some point Blizzard was going to grow up and go their own way," Matt tells us.

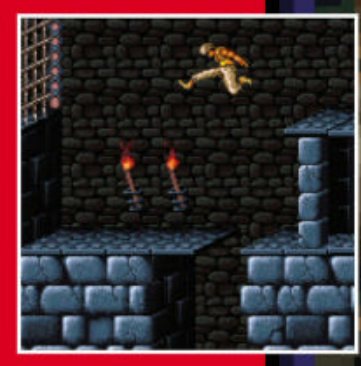
Stu Rose remembers those early days at Blizzard fondly, but found out later that the company was, alarmingly, barely staying afloat. "I found out that the paycheck Mike [Morhaime] sent out just before Davidson bought us in 1994 – he put it on his credit card," he says. "We were so young and naive then. There was no strategy. It was just like 'What are we doing next week?'

Of course, history suggests the heads of Blizzard always had a long-term vision. As it turned out, *Blackthorne* was the final run-up before the company leapt over the gap into the upper echelons of the games industry.

CINEMANIA

Cinematic platformers were defined by realistic movement, detailed graphics and rotoscoped animations which meant that characters had to complete a full animation before moving onto the next one. It could make movement awkward at times, but it looked incredible. Here are three such games that preceded *Blackthorne*.

PRINCE OF PERSIA (1989)

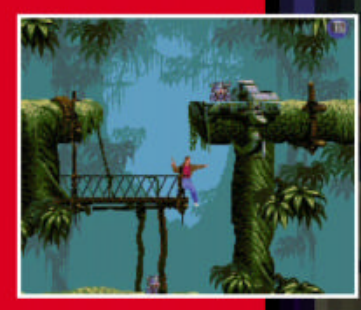


The game that inspired many of the visual and mechanical techniques used in subsequent cinematic platformers. It received a SNES port in 1992, renewing interest in the series and inspiring Blizzard to make '*Prince Of Persia* with guns'.

ANOTHER WORLD (1991)

Building on foundations established by *Prince Of Persia*, *Another World* went truly 'cinematic' with the genre, introducing incredible backgrounds, cutscenes and gorgeous vector graphics. Blizzard attempted to use a similar vector graphics style for *Blackthorne*, but struggled to fit it onto cartridge.

FLASHBACK (1992)



From the same studio that made *Another World* (Delphine Software, but without designer Eric Chahi), came *Flashback*. While not as groundbreaking as its predecessor, *Flashback* was more fluid, and took advantage of early CD tech on platforms like Mega-CD and PC to include voice work and prerendered cutscenes.

HyperBoy

» PLATFORM: GAME BOY **» RELEASED:** 1991
» COST: ¥5,800 (launch), £45+ (now, boxed), £10+ (now, unboxed)

The key appeal of the Game Boy was its portability, but that didn't stop enterprising manufacturers from creating devices intended to turn it into a tabletop console. The Saitek Booster Boy was offered up to audiences in the western world, while the HyperBoy was a Japan-only effort by Konami, which cost almost half as much as the console itself. For this price, it offered a variety of additions to the Game Boy experience – screen magnification and lighting, stereo speakers, larger buttons, and a joystick that can be switched between four-way to eight-way operation.

This all sounds good, and it works reasonably well, but it's not exactly the height of technological sophistication. The only electronic parts are the speakers and lights, which are powered by D batteries. The control is entirely mechanical, with the Hyperboy's plastic protrusions physically prodding the console's d-pad and buttons whenever you operate its stick and buttons. Of course, this means that it isn't compatible with later models of the handheld like the Game Boy Pocket and Game Boy Color, where the form factor is different and button placements have been adjusted. ✱

HyperBoy fact

■ The HyperBoy doesn't supply any power to the Game Boy via its batteries, but it does leave the socket for the power jack open, so it's possible to play with the system plugged in. The link cable port is left free, too.

SYSTEM SUPPLIED BY
PETER LEIGH

ESSENTIAL GAME DIG DUG

It's hard to recommend a specific game for this type of general-purpose peripheral, but *Dig Dug* does take advantage of a number of the HyperBoy's features. For a start, the ability to switch the joystick to four-way operation is great for a wide variety of classic arcade game conversions that don't support diagonal movement. The larger buttons are also great for games where you need to bash buttons, as you do when pumping up enemies in *Dig Dug*. Of course, the best bit is the fact that the speakers let everyone in the vicinity hear the excellent music [You what? – Ed] that plays whenever Taizo Hori moves.

THE HISTORY OF RollerCoaster TYCOON®

CHRIS SAWYER'S LANDMARK THEME PARK CONSTRUCTION GAMES ARE CAPABLE OF THE SORT OF EMOTION THAT ALL OF THE VERY BEST RETRO CLASSICS CAN PRODUCE. WE TAKE A LOOK AT THE SERIES THAT'S HAD AS MANY UPS AND DOWNS AS THE RIDES IT'S BASED ON

Words by Adam Barnes

Whether the thought of riding one sends your stomach into free fall, or your heart racing with excitement, you can't ignore the sheer number of thrill-seekers out there that love a good rollercoaster. And the idea of running an amusement park has become such a staple of construction games today that many gamers will find their interest piqued by just the mere mention of a new game devoted to building a theme park. And no names can get such a giddy rise out of gamers than the original: *RollerCoaster Tycoon*.

"I was really struggling for inspiration and focus with *Transport Tycoon 2*," says Chris Sawyer of how the game first got started. "[A sequel] seemed a good idea at the time but the planned improvements over *Transport Tycoon Deluxe* weren't that great and the power and memory of PCs at the time weren't enough to allow a more ambitious approach with the sequel." Chris doesn't really need much introduction when it comes to the genre: it was his games that gave birth to the genre term 'tycoon game', after all. "At the same time I was developing quite an interest in rollercoasters, a fascination with their design and engineering, and I'd also played games like *Theme Park* which included crude representations of rollercoasters." For Chris, working on such a concept was a distraction from the primary game, and the fact that he could 'research' these rides first-hand only helped with that – especially since Chris had his own fear of rollercoasters that he wanted to overcome. "Luckily the success of *Transport Tycoon Deluxe* meant I could afford to postpone the sequel and take some time off."

The move into a full title was an invisible one, according to Chris, who says it was a gradual process as he just began working on the concept of developing the idea of building rollercoasters in the existing *Transport Tycoon* engine. "Early on there was very little designing or planning at all," Chris recalls, "I just worked from the bottom up looking at the technical aspects that interested me, and the game gradually grew organically from there. Much of the early days were spent trying to come up with a data and display system to make it possible to build simple rollercoasters and have them functioning and looking good."

As a result of this interest, the very earliest avenue that Chris wanted to get right was the "look and feel of the rollercoasters" in a way that felt believable. "Not necessarily completely realistic," he explains, "but enough to get them looking good aesthetically and giving the right impression of speed and accelerations and so on." Chris adds that it wasn't just about the thrills and spills of the big coasters that we all recognised, the corkscrew or wooden rollercoaster for example, but also those that perhaps weren't designed with the extremes in mind. "[I wanted] to show the pros and cons of different types of rollercoaster track and trains," he says, "this started with just a single tubular steel-tracked rollercoaster and a single wooden rollercoaster, but I felt it important – and fun for the player – to get to know the limitations of each type, and that even the lowlier and more

» [PC] There's a certain degree of pride that comes from seeing your park running smoothly.

CHRIS SAWYER

JONNY WATTS

» [PC] Some people liked building the coasters, others just wanted to plant gardens.

RollerCoaster Tycoon

THE PERFECT PARK

HOW TO TURN YOUR HUMBLE PARK INTO A PROFIT-CHURNING TITAN

THE BASIC NEEDS
Intersperse drinks, food and toilet stalls throughout your park, but don't cram them all together like a typical food court. That won't be as effective.

BEHIND THE MASK
Entertainers are actually pretty valuable. Get them to work in rides with long queues or at the exit of the park so that guests leave on a high note.

MULTIPLE PATHS
If your park starts to get busy, create multiple routes around the park. This splits the crowd up and stops the complaints.

THE PRICE IS RIGHT
While the behind-the-scenes algorithm is pretty complex, price your rollercoasters at roughly 50p under the Intensity Rating for maximum profit.

PLANTING HAPPINESS
It's easy to overlook decoration as a waste of time and money, but the mood of your guests is bolstered by a pleasant scene.

MICROMANAGEMENT
It's not enough to just hire handymen, you need to designate areas and tasks yourself, otherwise you will likely find them wandering off aimlessly.

KEEP GUARD
If you don't want to keep replacing your benches, bins and lampposts, hiring security guards and setting them to patrol the area is a worthwhile investment.

KNOW YOUR RIDES
Not all guests are born equal: some are quite happy with carousels and bumper cars, others look for ways to hurl their lunch onto the floor.

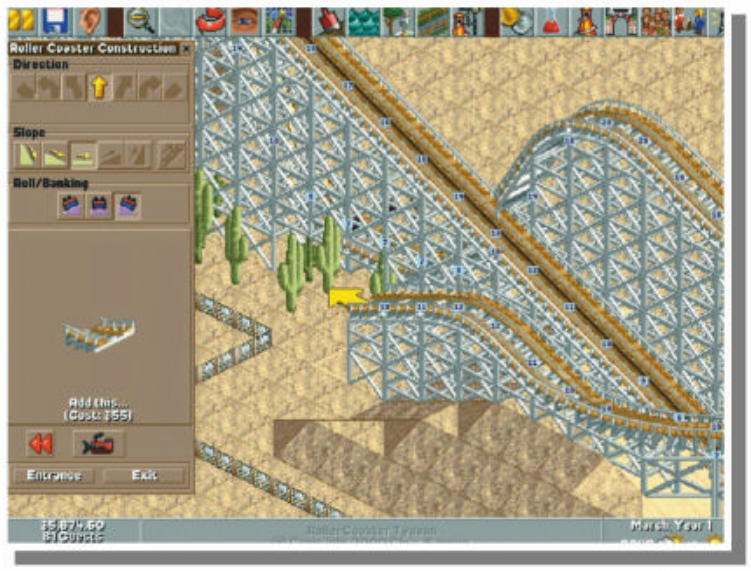
» [PC] The heritage of *Transport Tycoon* – with its menu style – lives on in *RCT*, though even at the time it was criticised for its UI.

» [PC] The challenge in rollercoaster design is building something that is both creatively interesting and isn't so extreme that no one wants to ride it.

"ROLLERCOASTER TYCOON'S QUANTITY AND DEPTH OF DIFFERENT TYPES OF ROLLERCOASTER IS UNEQUALLED IN OTHER GAMES" CHRIS SAWYER

restricted types of rollercoaster can be fun in their own way." This led to *RCT* having a range of coasters available and didn't just rely on providing the player with bigger, faster, or more inversions to the rides. "*RollerCoaster Tycoon*'s quantity and depth of different types of rollercoaster is unequalled in other games," adds Chris, "and each type has its own pros and cons which need to be learnt and exploited."

At this point games like *Theme Park* and *Sid Meier's Railroad Tycoon* had already set certain precedents for what should be done with a business management game, and Chris admits he was in some way influenced by these in his own games. "I was never personally into the business side of these games as much as other players," Chris explains, "but I really enjoyed the construction and tinkering, and watching the little world running and seeing what was going on. So in some ways I wanted to create a simpler game than the out-and-out business strategy games. I played *Theme Park* quite a bit, but it frustrated me that the rollercoasters were represented so crudely in the game." Chris recalls the fact that isometric games like *SimCity 2000*, Sid Meier's strategy games and even his own *Transport Tycoon* were all popular at the time, and that was ultimately why he stayed with an isometric viewpoint rather than 3D, which was becoming far more prevalent. "I thought that something like *Theme Park* with a detailed isometric viewpoint like those games would look fantastic. I remember reading a 'making of' article in a games magazine about *Theme Park* and the developers had actually tried isometric graphics but dismissed them due to too many problems – maybe that inspired me too!"



» [PC] The process of building is a complicated one to truly understand, but fans of the game will no doubt find it instinctive by now.

This ended up being just one of the ways that *RollerCoaster Tycoon* would become such an iconic PC game, but it was a blend of so many elements: the music, the graphical style, the sounds of laughter that permeate each level. To fans of the game reading this, the screenshots alone are likely enough to recall the sounds of the game. "I did a bit of audio recording myself on trips to Blackpool Pleasure Beach and Lightwater Valley," says Chris, "but despite using decent digital equipment the results were a bit disappointing and only a couple of samples ended up being used." He adds that a rollercoaster club friend of his had shared with him some movies on VHS tapes, too, which had "the occasional bits with the kind of sounds I needed". All of this was collated and sent through to Allister Brimble, who developed the audio for the game: "He managed to clean up the recordings and performed some magic to make them 'loop' smoothly, so we ended up with quite a few different genuine rollercoaster running sounds and lift chain sounds and so on, many of which have now become iconic."

Eventually the novelty evolved into its own full release, but even though Chris was proud of the work he had done, there was still a belief that it was only going to have limited interest. "I personally felt I'd achieved something worthwhile with the game, and I knew from the few testers who got to see the game early on that they were really enjoying playing it. However the wider feeling was that it was always going to be a niche product, much more so than *Transport Tycoon*, and might not take off sales-wise at all. In fact, I don't think sales did take off initially – it was quite a gradual climb in sales before the game hit the big time."

But the game did hit the big time. Releasing in March 1999 and published by Hasbro Interactive, its slow start did ultimately go on to become the best-selling PC game of the year. This success rolled on for the next two years, eventually being beaten by only one other PC game: *The Sims*. And much like Maxis' life simulator, *RollerCoaster Tycoon*'s success was tied to its broad appeal. "What became apparent quite early on is that the game was appealing to such

BRANCHING OUT

TAKE YOUR PARK MANAGEMENT SKILLS ELSEWHERE

ZOO TYCOON

This pair of zoo management titles published for PC by Microsoft still remain great additions to the 'tycoon' genre of business simulation games, though with no digital version you'll need to track down a physical copy. There's a lot of depth within the habitat design and animal happiness, adding to the need to keep guests happy, too.

JURASSIC WORLD EVOLUTION

Frontier Games leveraged its knowledge with the genre to develop this movie tie-in that actually wasn't all that bad. There have been attempts to replicate the film series as business management games in the past, but none had found that balance quite as well as Frontier had with this one.

TRANSPORT TYCOON

Chris Sawyer's first game still remains as compelling and satisfying to play as *RollerCoaster Tycoon.* It's a little more open-ended than the scenario-based gameplay of *RCT,* but the intricate systems that power the transport industry simulation are just as enthralling now as they ever were. There's even an open source version called *OpenTTD* that adds even more to the concept.

THE MOVIES

Building a film studio up from the birth of the silver screen right through to modern day filmmaking, *The Movies* was at once a great satire of the film industry and a thoroughly fun and humorous business management game. It was criminally overlooked at the time, but replicates what it was about Bullfrog's *Theme Park* and *Theme Hospital* that made them so fun.

PARKITECT

While *Planet Coaster* is by far and away the 'modern' theme park management game to play, if you're looking for something that has the design sensibilities of *RCT* with a contemporary approach to design and gameplay, then *Parkitect* is the way to go. It doesn't just copy the concept, though: it expands and improves on it in many ways.

» [PC] The sequel didn't change much about the core design of *RCT,* but instead refined and finessed everything.

▶ a wide demographic – girls as well as boys, women as well as men, and people of all ages. And people were playing the game in different ways: some were just enjoying designing the flowerbeds and footpaths and making sure their guests were enjoying their stroll around the park, while at the opposite end some were pushing the limits of rollercoaster construction and creating the most technically amazing rides."

The release of the original was quickly followed up with two expansion packs, *Added Attractions* in 2000 and *Loopy Landscapes* in 2001, each adding new rides and decorations to the base game. All the while a sequel was in the works, a fairly obvious choice considering the game's popularity. "I think the decision was made quite quickly, as soon as we knew how much people were enjoying the original game and the add-on packs we released in the months that followed," recalls Chris. "There were plenty of things from my wish list that didn't make it into the original game, and areas of the game I really wanted to completely overhaul given enough time to do the work. I was also still really enjoying working on and improving the game, so all in all it made sense to carry on with it." Unlike *Transport Tycoon*, where Chris couldn't think of ways to improve upon the game without new advances in computing technology, with an *RCT* sequel he was driven to fixing a number of things he had felt were lacking. "There were quite a few things I wanted to improve in the game engine itself, for instance freeing up the restriction on scenery items having to be ground-based, plus a long list of smaller improvements I really wanted to make now I had time to do it. But mostly I wanted to make the game bigger and better and allow players to be more creative: so more types of rollercoaster and scenery, and more creative options for constructing scenery and personalising rides." That was a defining attitude to the sequel's development, too, with Chris stating that he was "keen not to mess with the game too much" since its popularity told him that he had already struck the right balance for the title.

Releasing in October 2002, *RollerCoaster Tycoon 2* released to even more success,

» [PC] One of the reasons many enjoyed *RCT2* so much more was the wider range and creative freedom of the scenery objects.

reaching 7 million copies sold despite critics feeling more should've been done to bring the concept into the third dimension. But for Chris, with all the improvements he'd brought into the sequel, he'd done all he wanted to do with the franchise. And now that PC tech had evolved, he felt he had the computing clout to return to *Transport Tycoon*: he went on to develop *Locomotion* rather than pursuing *RCT* any further, but of course that wasn't to be the end of the series. The first step was to produce a pair of expansion packs just as had happened with the original, but rather than handle it himself, he reached out to a developer he'd already worked with before. "It goes really far back," says Jonny Watts, COO of Frontier Developments, of how the studio knew Chris. "He had worked with David [Braben] porting a lot of his games over to PC, he even did *Frontier: Elite 2* in 1993, and so we always had this connection even when he went off to do the awesome *RollerCoaster Tycoon*." Prior to making his name as a development tycoon, Chris had been porting games over to PC, and his keen understanding of assembly code had meant that he was able to work with computationally complex games, such as *Elite*'s early 3D graphics. "And so we were always in contact," adds Jonny, "and what happened was, Chris was trying to work on *Transport Tycoon* and he offered for us to work on the expansion packs for *RollerCoaster Tycoon 2*." For Jonny this was a dream, and not only because of his appreciation of the *RCT* games. "I grew up in Liverpool and I would go to Blackpool at every opportunity to ride all those coasters and see all the theme park," he says. "I was a big fan of *RollerCoaster Tycoon*, and I think that really helped too, because when he came down to talk to us I hope my enthusiasm and knowledge of the game came across."

Alongside working on a port to the Xbox, Jonny and the team at Frontier were put to work conceiving and creating two expansions for the game, and they were eager to make sure the heritage of the already beloved series was handled tactfully. "His direction was very high level," says Jonny of the input Chris gave then. "What he wanted to do was to make sure that we really gave a lot of energy to it and a lot of quality to it. For a game – even though it's only a pixel-based game – it's really complicated and very sophisticated, and the way you have to construct the art to make those coasters and the scenery... you have to be really quite technical, too." Rather than work too much on developing the concept further, Frontier instead emphasised the ability to build elaborate scenes, a feature that had considerably more importance in the sequel.

BUILD A BETTER COASTER

WHICH RIDES ARE THE BEST TO USE IN YOUR PARK?

CORKSCREW

The basic looping coaster is the go-to ride of choice, but the corkscrew type adds a special spiralling track piece that adds to the variety and capabilities of your designs. The option to create launched starts, rather than the typical lift chain, means quick yet exciting rides for high turnover.

WOODEN

Of all the options available, the classic wooden coaster is one of the simpler rides. Its construction is rigid in its form and functions, ultimately meaning that so long as you don't whip guests around the track at continual breakneck speeds, you should still have something that is fun for everyone.

VERTICAL DROP

Most fans of rollercoasters will have been on Alton Towers' Oblivion, which is pretty much the inspiration for this coaster type. You won't need to do much to make a thrilling ride out of this because the unique timed drop track piece adds to the excitement, making this one of the easiest designs you'll build.

WOODEN WILD MINE

Because of the sharp, compact turns and drops that are possible with the 'wild' coasters, it's a little too easy to end up with a ride that is just too intense for every guest. Find the right balance, however, and that compactness can really work in your favour when fitting a new coaster into a cramped park.

STEEL TWISTED

The various banking and twisting track pieces of this coaster provides the most interesting possibilities, and for that reason it can be intriguing to try and design one of these for your park. It'll take some time and skill to find the right balance, though, so it's probably better to wait until you've a steady income.

HYPERCOASTER

Designed primarily for their intense heights and dramatic speeds, the hypercoaster in *RCT* is based – at least its appearance – on Blackpool Pleasure Beach's Big One, which actually features in the game, too. These rides take up a lot of space, but the speeds they're capable of make them an appealing addition to the levels where that isn't a problem.

» [PC] Though it's completely 3D, *RollerCoaster Tycoon 3* still uses the exact same construction method as its predecessors.

"I'm really interested in the theming of theme parks, too, and not just the rollercoasters," Jonny explains. "So what I really liked about doing *Wacky Worlds* and *Time Twister* was that we could really make all these different worlds and different lands. We used really advanced 3D techniques and rendered them out as pixels, and so that was quite good – I think Chris really liked the way we lit it all."

After the release of the two expansion packs – and *Locomotion* – Chris decided to step away from the industry. With game development growing beyond the scope of a one-man team and his preference of genre taking a backseat to the more action-based 3D games, the *Tycoon* developer decided he didn't want to be involved with the industry anymore. More than that, he'd done everything he felt he wanted to with transport and amusement parks, and didn't want to create sequels purely for the sake of it. At this point he sought a company to handle the *RollerCoaster Tycoon* licence, to allow his much-adored creation to live beyond his own input. It was Atari that ended up with the publishing rights, and so a third game was put into the works, and this time it was going to be 3D. "What was really great about the third game was that I think we had really earned his trust," says Jonny of Frontier being giving the opportunity to develop a totally new sequel. "So we did those expansion packs, we did what he wanted us to do, we adhered to the creative oversight of it, we were very sympathetic to what rollercoasters can do, and I think because of that he said we were a safe pair of hands. We spent those thousands of hours learning everything there is about *RollerCoaster Tycoon* and so from a development point of view he was pleased that his vision would be maintained."

The move to 3D was a natural progression for the franchise, which brought with it a number of crucial additions and changes. Some were no-brainers such as the addition of the ability to ride your own coasters in first-person view, but others were a little more controversial. The change in UI, for example, was not fondly received at the time, despite the fact that the original *RollerCoaster Tycoon* games had been criticised for the very same thing. "It wasn't a question of adding to the game, I wouldn't even say reimagining, it was just making it work in a 3D world," says Jonny. "We were so conscious that we wanted to maintain Chris' vision. My job, my passion, was always to make sure that he liked what we delivered, and I think it went pretty smooth because we were obsessive about hitting this quality and being true to the originals, so our feedback was always positive. I think our research and efforts really paid off: when he came to visit, he was just so complimentary. I think he was quite excited to see the rollercoasters from different angles."

The core simulation running underneath *RCT3* was actually similar to its predecessors, the team at Frontier sticking to its experience with 3D graphics and leveraging the core gameplay that had come before. It was a smart decision to do so; the game was well received and went on to become the biggest seller of the franchise. Though Chris had worked as a consultant on the project, it was mostly to see his vision properly transition into the third dimension, and after his involvement came to an end he stepped out of the limelight entirely. "I didn't have much enthusiasm for continuing in the games industry at that time," explains Chris, "the style of games was moving away from what really interested me, and a long-running dispute with the publisher was making it very difficult to focus on anything game-related, or indeed to feel any kind of positivity towards the games industry." Yet while Chris alludes to the growing disinterest in simulation games after the *Tycoon* bubble began to burst, there was still life in the genre yet, with *RCT3* eventually going on to sell 10 million copies across its expansions and repackagings. As for that 'dispute', well Atari's iron-fisted control over the franchise didn't just turn Chris Sawyer away from the industry, but it meant there was a bitter taste left with the franchise. Unpaid royalties, disputes over who could work on the series and lawsuits meant that only a very poor 3DS port was developed since the 2004 release of *RollerCoaster Tycoon 3*. Decreased interest in tycoon games, waning sales on PC gaming in general and a licence holder unwilling and unable to work on a sequel meant the hugely popular rollercoaster designing game quietly slipped into 'retro' status, with fans silently hungering for more.

That could've been the end of the story, too, but as indie games and nostalgia-fuelled Kickstarter games gave life to once-forgotten genres, the tycoon genre became viable again. Mobile gaming, too, began to dominate the headlines and gamers' thumbs, a perfect storm that gave the revitalised Atari cause to set about leveraging its valuable franchise. In 2014 it released its first mobile entry, boldly naming it *RollerCoaster Tycoon 4 Mobile*. It was a direct sequel, but it sure didn't feel like it; Atari instead took the brand and crammed it into a *Farmville*-style social app, lacking any sort of simulation. A mobile port of *RollerCoaster Tycoon 3* was then released in 2015, which naturally helped allay some of the bad blood of the previous release. And in 2016 Chris Sawyer even returned to work with Atari in helping Origin8 Technologies to bring a remastering of the original two games over to mobile. Sadly the goodwill that these two ports of classic games had built up was lost entirely in 2016 with the release of *RollerCoaster Tycoon Touch* and *RollerCoaster Tycoon World*. The former was a 3D recreation of the previous free-to-play title, and though it was a little better-handled, it was still a shadow of the game that the name implied. The biggest disappointment was *World*, however, a PC-only release that was touted as a reimagining of the classic simulations that gamers had loved all those years ago. But it was abhorrent, a game

OUT OF LINE *HOW TO TORTURE YOUR GUESTS*

DUNKING
Tired of a guest constantly complaining about your prices, or did someone just puke outside the toilets? Pick them up and drop 'em in the water. It won't stop the complaints, but it's cathartic.

NO WAY OUT
Guests can be pretty indiscriminate about chucking their trash on the ground, but they're obedient when it comes to this unerring No Entry sign. Use that to create no hope of an exit.

ENTERTAINMENT CAGE
While your tireless costumed entertainers do a pretty good job of keeping the mood light, being trapped inside a cage with one of these persistently dancing chaps must be hell.

BUSTING
You have to be especially crafty for this one. Place numerous drink vendors that offer free beverages, but only one toilet. At the opposite side of the park. On top of a hill. With a £10 charge.

"WE WERE SO CONSCIOUS THAT WE WANTED TO MAINTAIN CHRIS' VISION. MY JOB, MY PASSION, WAS ALWAYS TO MAKE SURE THAT HE LIKED WHAT WE DELIVERED" JONNY WATTS

that *Eurogamer* described as "Dismaland without the irony, a machine designed to fleece your pockets and offer the bare minimum in return." While 2018's *RollerCoaster Tycoon Adventures* managed a passing grade, even this reused assets from 2016's free-to-play game in a very basic simulation title: simply put, nowadays the *RollerCoaster Tycoon* name just cannot provide the same beaming grin in its players that an overjoyed guest of the original game might sport.

If this melancholic close has got you despairing, there is a silver lining. "Going self-published meant that we could go back to our principals," says Jonny of Frontier's 2016 release, *Planet Coaster*. "I can't deny that the heritage of *RollerCoaster Tycoon* is there." In fact, at the earliest point in its development, *Planet Coaster* was called *Coaster Park Tycoon*, which goes some way to revealing just how much Frontier's history with *RCT* has been embedded in the game. "We always talked about really wanting to make this game, but it only took us going self-published to get that faith that there are players out there that like it." And while *Planet Coaster* is still very much its own thing, it's clear there's an understanding about what made *RollerCoaster Tycoon* – and with it the subgenre of management games it helped spawn – so well loved in the first place. "Just about everybody goes to a theme park," says Jonny of why amusement parks have been such a staple in the simulation genre. "They're wonderful plots of escapism, but they're also this fantasy world where there's so much creativity. If you're doing a theme park game where you can place down all these objects, the only limiting thing is your imagination." This was true with the original games, of course, which were designed from the start as rollercoaster construction tools. "And also I think that Chris did an awesome job with the original *RollerCoaster Tycoon*," adds Jonny, "he showed us it could be done."

» [PC] Frontier's *Planet Coaster* might not be a *RollerCoaster Tycoon* sequel, but it has the heritage of the franchise deep within it.

» [iOS] Both the original games are available for mobile devices, and it's a huge achievement to get them running so effectively on a touchscreen.

» [iOS] There was a bit more of a game beneath *RollerCoaster Tycoon Touch*, but it still didn't have the same interest or creativity that the franchise was known for.

PUKE PATHS

Build a rollercoaster whose entire purpose is to shake your guests up a bit, then make its exit just a short plateau. Those guests will spend eternity traipsing through one another's vomit.

COMPANY COLOURS

Guests can't turn down a great offer – especially when something is free – so if you hand out branded hats, balloons and T-shirts you'll be able to turn the entire park into your own marketing army.

NO END IN SIGHT

There's no logic that goes into solving the hedge maze, just a directional decision at each turn. Use that to your advantage, and have guests endlessly wander the world's worst maze.

CATAPULT

Arguably the most iconic aspect of *RollerCoaster Tycoon* – to Chris Sawyer's surprise, too – is the willingness of its players to launch an untested attraction and send its riders to their death.

CLASSIC MOMENTS

Rocket Ranger

» **PLATFORM:** AMIGA » **RELEASED:** 1988 » **DEVELOPER:** CINEMAWARE

Early in Cinemaware's game, players are given an urgent mission to rescue the kidnapped Dr Barnstorf and his daughter Jane from a Zeppelin making its escape over the Atlantic. The Nazis want to use his knowledge to produce Lunarium bombs which will lower the IQ of all adult males in the vicinity of detonation by about 30 points. As making Americans stupider is a big no-no, you need to don your rocket pack and helmet and get up there sharpish, soldier.

After a short intermission, as you reach for your blue cardboard secret decoder wheel to figure out how much fuel you need to get past the game's copyright protection, normal flight is resumed. And while the skies around the giant airship thunder with exploding German AA fire, our hero must use his radium pistol to take out several of the pesky shells and get close enough to blast the flak gunners from the back of the Zeppelin's gondola. But aim carefully, because if you hit the hydrogen-filed airframe you'll see an almighty explosion and two tiny parachute canopies drifting down to a waiting U-boat below, leaving the Nazis to have a party… a very big party.

BIO

Playing like an interactive homage to classic Fifties sci-fi cinema serials and comics, *Rocket Ranger* remains one of Cinemaware's most memorably atmospheric releases. Set in an alternative World War II, its entertainingly bonkers plot saw gamers battling global fascism with the help of a futuristic rocket pack and laser pistol sent from the future. It mixed arcade-style minigames with a real-time strategy section, with failure leading to the catastrophic instalment of a Nazi regime in the White House, something which would likely never happen in real life.

MORE CLASSIC ROCKET RANGER MOMENTS

Up And Away

Even getting off the ground can be a struggle, requiring perfectly timed button-bashing with your character's footsteps until you're able to blast off. Our tip is to go easy on the fuel load, otherwise you'll likely spend another two months practicing taking off and, as the game likes to keep telling you, the Nazis will probably go throw another party.

Punching Nazis

As you discover and infiltrate secret rocket labs across the globe, you'll likely come across this fella, who seems to be the only guard on station at any particular time, and hasn't even been given a gun. German austerity measures, perhaps? What follows is one of the most fun minigames in *Rocket Ranger*, as you attempt to smack him about *Punch-Out!!* style.

Rumble In The Jungle

The game never explains to you why the Nazis like to construct their Lunarium holding facilities inside ancient temples in South America, forcing you to continually raid them so you can keep your rocket pack topped up with fuel. Unfortunately they're brimming with machine guns, so it's best to let your agent tackle them, after which he'll send you fuel each month.

Ticket To The Moon

It doesn't exactly take rocket science to work out that the source of the Lunarium scourge has to be the Moon, and you'll be able to construct a shiny red spaceship to get yourself there. On arrival you'll find that the Nazis have kidnapped wholesome American women to work in the Lunarium mines, and only you, Rocket Ranger, can save them. Good luck!

SO YOU WANT TO COLLECT...

NEO-GEO FIGHTERS

Crazy prices, graphical excess and enormous cartridges are some of the things that come to mind when we think about SNK's premium console, but fighting games are easily the most prominent. We look at the games you should add to your collection – and the ones you might only be able to dream of

Words by Nick Thorpe

HUNGER FOR IT

GAROU: MARK OF THE WOLVES

DEVELOPER:	SNK
RELEASE:	1999

EXPECT TO PAY £830+ (AES, JP)

EXPECT TO PAY £3,000+ (AES, US)

Though it's now 20 years old, this *Fatal Fury* series reboot is still one of the most gorgeous fighting games that we've ever had the pleasure to see. It's easy to expect the detailed, attractive sprites that were SNK's hallmark during the Nineties, but the smoothness of the animation was rare for a 2D fighter of that era – or indeed any other. But it's also an impressively advanced fighting game, with mechanics like the Just Defend and TOP gauge that make it feel thoroughly modern today. As a result *Garou: Mark Of The Wolves* is arguably the very best fighting game to grace the Neo-Geo hardware, though there's enough strong competition on the system that there will always be someone out there willing to dispute that claim and champion their own favourite brawler.

EXPECT TO PAY £150+ (MVS US/JP)

» [Neo-Geo] Rock Howard takes moves from both dad Geese and adoptive dad Terry.

» [Neo-Geo] Freeman is a weird one, a serial killer who is more than happy to stab his opponents.

But is this game worth the high prices that the home cartridge versions command? We'd think twice, and maybe three or four more times. But if you've got that kind of disposable income, you should pick it up over some of the more expensive options on this list. If you're an MVS owner, just go for it.

MARKS OF DISTINCTION

What sets Garou apart from the rest of the pack

Just Defend
This advanced guarding technique is activated when you pull back on the joystick at just the right time. Pull it off successfully to reduce your recovery time and regain a small amount of health. Time it incorrectly and eat fist.

TOP
Short for Tactical Offensive Position, this occupies a chosen area of your life gauge. Once your life total reaches this area, it grants you greater damage, faster filling of the super gauge, health regeneration and an extra move.

Refreshed cast
In a bold move, SNK chucked out almost the whole *Fatal Fury* cast for this game, leaving only Terry Bogard. It worked, though. The likes of Rock Howard, Tizoc, Gato and Bonne Jenet have since become firm favourites with fans.

Animation excess
While it looks like any other late Nineties 2D fighting game in still shots, *Garou: Mark Of The Wolves* is a graphical marvel – it's worth pointing out once more that the game's fluid animation is astonishing to behold in motion.

EXPECT TO PAY £25+ (AES, JP)

A CHEAP SLICE OF THE ACTION

SAMURAI SHODOWN

DEVELOPER: SNK
RELEASE: 1993

EXPECT TO PAY £25+ (MVS US/JP)

■ While the Neo-Geo's reputation as an expensive system to collect for is well deserved, the cheap end of the software library is pretty affordable and offers games that are worth your time. *Samurai Shodown* is one of these – the arcade game was enormously popular and the home cartridge sold well, so there are plenty of copies to go around no matter what version you play. The weapons-based fighter offers high damage and low combo counts, which is still a relatively unique approach to the genre, and one which ensures that every encounter is deliciously tense. The game was censored for American audiences, but this shouldn't affect which version you buy – all Neo-Geo carts are region-free, and the edits are based on your console's region rather than the cartridge's region. At these prices, you should definitely add the game to your games collection.

» [Neo-Geo] A deadly clash of swords – who will make it out with their weapon still in hand?

» [Neo-Geo] Despite its decidedly Japanese style, *Samurai Shodown* includes foreign fighters like Charlotte.

EXPECT TO PAY £75+ (AES, US)

BREAK OUT THE WALLET

BREAKERS

EXPECT TO PAY £2,400+ (AES, JP)

DEVELOPER: VISCO
RELEASE: 1996

■ Although many of the Neo-Geo's fighting games were developed by SNK itself, there were some very good third-party efforts and VISCC's *Breakers* is one of them. While the characters aren't particularly memorable compared to its rivals, it's a solid B grade game – and if you're a fan of Capcom's output of fighting games you'll be in your element, as the game is often compared to *Street Fighter Alpha 2*. It's good to pick up if you've already had your fill of the system's high-profile games.

But while *Breakers* is a decent fighting game, it's also one that demonstrates why most people should aim to collect for the MVS over the AES. The home version was exclusive to Japan and quite rare, so it goes for the price of a reasonable used car, whereas the common arcade cart is more comparable to a remote control toy car.

EXPECT TO PAY £40+ (MVS US/JP)

» [Neo-Geo] It's always satisfying to end the round with a super move – it's a lovely flourish.

» [Neo-Geo] Charging straight into a fireball isn't going to go well for Tia.

NICE DAY FOR A FIGHT WEDDING

MATRIMELEE

EXPECT TO PAY £1,000+ (AES, JP)

DEVELOPER: NOISE FACTORY
RELEASE: 2003

EXPECT TO PAY £1,100+ (AES, USA)

■ Many of the later Neo-Geo games were sequels in ongoing franchises, and *Matrimelee* is one of them, being part of Atlus' *Power Instinct* series. But it manages to stand out from yearly *King Of Fighters* updates as it's pretty bonkers – after all, the goal here is to win a fighting tournament in order to marry a princess (or the king's older son, if you're playing as one of the women). There are some pretty eccentric characters in the game, and the graphics and music are as great as you'd expect for such a late release on the system. But while *Matrimelee* is good and you would definitely have some fun with it, it's not held in nearly the same esteem as the comparably priced *Garou: Mark Of The Wolves*, or indeed some of the cheaper options on this list. Investigate those first, then return to this later.

EXPECT TO PAY £175+ (MVS)

» [Neo-Geo] Ah yes, the large comedy hammer – a staple of cartoon combat.

» [Neo-Geo] Why does Buntaro's in-game sprite look younger than his art?

BIZARRE BRAWLERS

Some of the oddballs competing for their dream wedding

CLARA HANANOKOJI

She's a magical girl just like the type you might have seen in *Sailor Moon*, but rather than fighting for justice, Clara is on the hunt for a rich man to marry. She can smash enemies over the head with a huge squeaky hammer, or turn them into an animal and beat them up while they're defenceless.

POOCHY

This canine superhero is actually the spirit of former *Power Instinct* combatant Kinta Kokuin's dead dog. He stole the entry form from Kinta, and actually fights by throwing bones and digging in the ground. But hey, why fight like a man when you can fight like a dog?

BUNTARO KUNO

Although he participates in the Matrimelee tournament, this delinquent isn't particularly interested in winning the hand of the princess. Instead, he wanted to meet frequent *Power Instinct* competitor Reiji Oyama, an obsessive karate practitioner who he sees as a role model.

COLLECTING TIPS

Beat the boots

■ Due to the high value and frequent bootlegging of Neo-Geo games, consider requesting a photograph of the cartridge's PCBs to prove authenticity before buying.

Condition matters

■ If you're willing to put up with poor condition, you can get games relatively cheaply – we saw *Breakers* go for £800 less than usual because of a small cover tear.

Art market

■ AES prices are based on complete used copies, but MVS prices here are for loose carts. Expect to pay considerably more if original boxes and art inserts are included.

Forage forums

■ Don't just look on eBay for Neo-Geo games. The neo-geo.com forum has an active marketplace section, and UKVAC is good if you're looking for MVS games.

WHO NEEDS FOOD ANYWAY?

KIZUNA ENCOUNTER: SUPER TAG BATTLE

EXPECT TO PAY £120+ (MVS US/JP)

EXPECT TO PAY £30,000+ (AES EURO)

EXPECT TO PAY £2,200+ (AES JP)

DEVELOPER:	SNK
RELEASE:	1996

■ Those of you with knowledge of the Neo-Geo scene will have been expecting to see this. For those of you that are new to the format, this is one of the most expensive videogames on the planet – and really, it doesn't warrant the price. That's not because this sequel to *Savage Reign* is bad, mind. The game is as technically sound as you'd hope and the tag team gameplay does give it some novelty value, but it has a relatively slim roster and some of the character designs are underwhelming.

It's the fabled European release that fetches the big money – with just a handful of copies known to exist, it's about the same price as a deposit on a flat. But even the MVS and Japanese AES versions are relatively expensive, so unless you're desperate for tag team fights, you can get better games for your cash before considering this one.

DO I KNOW YOU?

Other places you might have seen the Kizuna Encounter cast

THE KING OF FIGHTERS

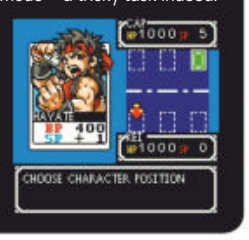
Despite this crossover series being the best place to reuse the better cast members, they've shown up infrequently. King Lion and Kim Sue Il cameo as extra strikers in *The King Of Fighters 2000*, while Sho Hayate gets an appearance as a mid-boss and playable character in *The King Of Fighters XI*.

NEO-GEO BATTLE COLISEUM

King Lion actually gets to be a full fighter in this appearance, though as a CPU-controlled boss he's encountered as Shin Shishioh – or King Leo, the true boss. If you play as him, he's regular old King Lion. To unlock him, you've got to beat him in Survivor Play mode – a tricky task indeed.

SNK VS CAPCOM: CARD FIGHTERS CLASH

Sho Hayate, Rosa, Kim Sue Il and King Lion all appear in this crossover card battler, as does Carol from the precursor Savage Reign. Unfortunately, all of their cards are basically junk commons that you'll move away from as soon as you've got something better to put in your deck.



THE SLUGFEST

THE KING OF FIGHTERS 98

EXPECT TO PAY £130+ (AES JP)

EXPECT TO PAY £450+ (AES US)

DEVELOPER:	SNK
RELEASE:	1998

■ There are ten Neo-Geo entries in SNK's flagship crossover combat series, and while many players have their own personal favourites, the 1998 version is considered to be one of the very best. As a 'Dream Match' entry, the game brings together most of the characters from the previous four games, including those who are officially dead or otherwise inactive. Without the need to introduce new roster members, the team was able to focus on balancing and refining the existing cast, allowing for some exquisite three-on-three team fights. The game is usually pretty easy to find (although as with most games, the US home cart is a different story), but the price is a little higher than for other common games due to demand. It's still well within reasonable territory for the Neo-Geo though, so pick it up when you get the chance.

EXPECT TO PAY £30+ (MVS US/JP)

» [Neo-Geo] Chizuru stands ready as Iori charges in wildly. Who will prevail?

ART IS PAIN

ART OF FIGHTING 2

EXPECT TO PAY £25+ (AES JP)

EXPECT TO PAY £120+ (AES US)

DEVELOPER:	TOAPLAN
RELEASE:	1990

■ *The Art Of Fighting* games feel a little stiffer than some of the other games on the platform, and the way special moves are limited feels a little bit bizarre today. However, there's no denying that it's one of the more beloved series in the SNK catalogue thanks to its strong characters – the Sakazaki family, Robert Garcia, King, Eiji Kisaragi and Mr Big all made their way to the *King Of Fighters* series and many of them became mainstays. What's more, it's got the iconic Neo-Geo presentation, with enormous sprites, scaling effects and speech effects that confirm that you're playing on arcade-level hardware. *Art Of Fighting 2* is one of the cheaper games to pick up whether you're playing on AES or MVS, so it's good to get when you're starting out – just be warned that the difficulty of the computer opponents is pretty high, so you'll probably want a friend around to get the most out of the game.

EXPECT TO PAY £20+ (MVS US/JP)

» [Neo-Geo] Those enormous character sprites are still a pretty impressive sight 25 years later.

MORE AES GAMES TO CONSIDER

SNK VS CAPCOM: SVC CHAOS

DEVELOPER:	SNK PLAYMORE
RELEASED:	2003
EXPECT TO PAY:	

£430+ (AES JP) **£500+** (AES US)

AGGRESSORS OF DARK KOMBAT

DEVELOPER:	ADK
RELEASED:	1994
EXPECT TO PAY:	

£200+ (AES JP) **£275+** (AES US)

RAGNAGARD

DEVELOPER:	SYSTEM VISION
RELEASED:	1996
EXPECT TO PAY:	

£650+ (AES JP)

THE KING OF FIGHTERS 2003

DEVELOPER:	SNK PLAYMORE
RELEASED:	2003
EXPECT TO PAY:	

£825+ (AES JP) **£1,500+** (AES US)

WORLD HEROES PERFECT

DEVELOPER:	ADK
RELEASED:	1995
EXPECT TO PAY:	

£300+ (AES JP) **£1,650+** (AES EU)

SPECIAL VINTAGE

FATAL FURY SPECIAL

EXPECT TO PAY £35+ (AES JP)

EXPECT TO PAY £110+ (AES US)

EXPECT TO PAY £25+ (MVS US/JP)

DEVELOPER: SNK
RELEASE: 1993

While the *Fatal Fury* games provided a great base for SNK to get into the fighting genre, it wasn't until this refined update of *Fatal Fury 2* that the series truly began to stake a claim to the genre's crown. *Fatal Fury Special* adds Duck King, Tung Fu Rue and Geese Howard, who hadn't made the jump from the original game to the sequel, as well as a special guest in the form of *Art Of Fighting*'s Ryo Sakazaki, and makes the boss characters playable. The game retains the series' characteristic two-plane fighting mechanics, and incorporates combos for the first time. While there's no denying that later sequels pushed the series even further, *Fatal Fury Special* is certainly one of the strongest of SNK's early efforts, and is still pretty good fun. It's a really solid foundation for your collection on AES due to its low price, but has more competition in its price bracket on MVS.

» [Neo-Geo] The return of Duck King is almost worth the price of admission alone.

STILL CUTTING EDGE

THE LAST BLADE 2

EXPECT TO PAY £2,000+ (AES US)

DEVELOPER: SNK
RELEASE: 1998

We've talked about the gorgeous 2D art in some of the other games in this list, but *The Last Blade 2* deserves special mention on this front. The expressive character sprites and detailed backgrounds are still a sight to behold, particularly the spectacular burning house stage, and the presentation between fights maintains the atmosphere beautifully. The music, inspired more by western classical music than Japanese sounds, plays its part too. The weapons-based combat is arguably more accessible than that of the *Samurai Shodown* games, as you can choose between two modes – Power gives high damage output and fewer combo opportunities, while Speed does the opposite, allowing players used to other fighting games to carry over their skills. This game always commands a good price due to strong demand, aided by the fact that the home releases are pretty uncommon, but its quality justifies the extravagance.

EXPECT TO PAY £100+ (MVS US/JP)

EXPECT TO PAY £425+ (AES JP)

» [Neo-Geo] SNK's artists were capable of drawing fantastically atmospheric backgrounds, as shown here.

DOUBLE OR NOTHING?

DOUBLE DRAGON

EXPECT TO PAY £250+ (AES JP)

EXPECT TO PAY £2,700+ (AES US)

DEVELOPER: TECHNOS
RELEASE: 1995

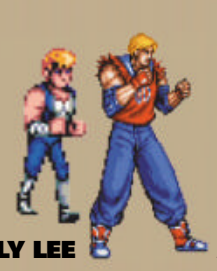
While this wasn't the first *Double Dragon* game to abandon the scrolling beat-'em-up template to focus on head-to-head fighting, unlike *Double Dragon V* this one was actually developed by Technos. It features Billy and Jimmy as well as old favourites, new faces and even characters from the awful live-action movie (thankfully drawn in anime form, so no worries about dreadful digitised sprites here). The game has some interesting systems, including context-sensitive punches and kicks, and a super bar that takes less effort to fill as you lose life, but it's otherwise a pretty average effort distinguished only by its heritage. It's enjoyable enough at MVS prices but if you're an AES owner the game isn't quite so appealing, especially as it creeps over the four figure mark for US home cartridges, so you may choose to spend your money elsewhere.

EXPECT TO PAY £30+ (MVS)

» [Neo-Geo] Billy has used his charge move, as you can see from that green glow.

» [Neo-Geo] We don't recall being able to set Abobo ablaze in the earlier games…

NEW LOOK?
How the Double Dragon cast was updated for the Nineties



BILLY LEE
Billy's worn out all of his jackets, and turns to big brother Jimmy for help. Since Jimmy doesn't own blue clothes, he gets a distinctive red top out of the deal.

ABOBO
Big ol' Abobo has really packed on the muscle here, to the point that his head now looks terrifyingly small. The codpiece was somewhat ill-advised, too.

MARIAN
Presumably sick of getting kidnapped all the time, Marian has taken some self-defence classes and ditched the pink skirt for a pair of denim hot pants.

KARNOV'S REVENGE

DEVELOPER: DATA EAST
RELEASED: 1994
EXPECT TO PAY:
£80+ (AES JP) **£150+** (AES US)

KABUKI KLASH

DEVELOPER: RACDYM
RELEASED: 1995
EXPECT TO PAY:
£300+ (AES JP)

WAKU WAKU 7

DEVELOPER: SUNSOFT
RELEASED: 1996
EXPECT TO PAY:
£1,100+ (AES JP)

RAGE OF THE DRAGONS

DEVELOPER: NOISE FACTORY/EVOGA
RELEASED: 2002
EXPECT TO PAY:
£1,850+ (AES JP) **£1,650+** (AES US)

NINJA MASTER'S

DEVELOPER: ADK
RELEASED: 1996
EXPECT TO PAY:
£1,700+ (AES JP) **£3,500+** (AES US)

Hardware Heaven

Famicom Titler

» **MANUFACTURER:** Sharp » **YEAR:** 1989 » **COST:** ¥43,000 (launch), £700+ (today, boxed), £400+ (today, unboxed)

Sharp manufactured a number of interesting Famicom variants under licence from Nintendo, but this one is arguably the most desirable. The bulky device is a video subtitling machine, which allows you to type using a keypad, draw using a small touch-sensitive pad and even add narration via microphone. The system had ports for input from camcorders and output to TV and VCR, and unusually for the era, supported S-video as well as composite AV for both.

The desire to integrate a Famicom with such a setup is one we don't understand, but it does provide some benefit to gamers. Unlike every other consumer model of the NES/Famicom, the Famicom Titler generates RGB video internally using a special variant of the PPU chip, and the S-video output is unique too. This means that it produces a better picture than most Famicom consoles right out of the box – but it has also been popular with modders, as it can be easily modded for true RGB output. While the development of the NESRGB mod has made great picture quality much more accessible to owners of other NES consoles, the Famicom Titler remains highly sought-after as a quirky piece of Nintendo history.

Famicom Titler fact

■ Although the Famicom Titler is the only consumer Famicom hardware to generate RGB video internally, the Famicom-based Vs System and PlayChoice-10 arcade boards also had RGB-capable PPUs.

PROCESSORS: 8-BIT 6502-BASED RICOH 2A03 CPU (1.79 MHZ)

RAM: 2KB MAIN RAM (EXPANDABLE VIA GAME CARTRIDGES), 2KB VIDEO RAM

GRAPHICS: 256X240 DISPLAY, UP TO 25 COLOURS ON-SCREEN FROM 54 PALETTE, 64 SPRITES ON-SCREEN

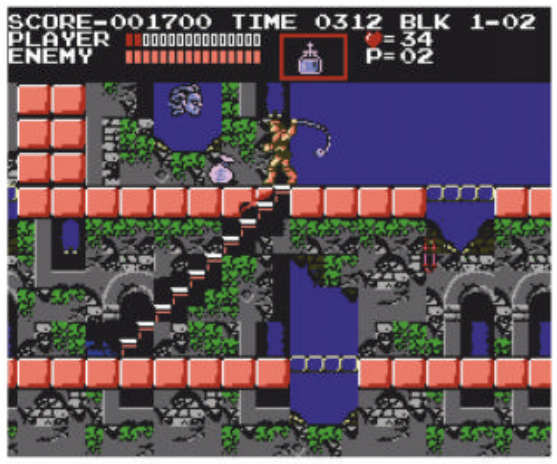
AUDIO: FIVE-CHANNEL AUDIO PROCESSING UNIT (TWO PULSE WAVE CHANNELS, ONE TRIANGLE WAVE CHANNEL, ONE NOISE GENERATOR, ONE DELTA MODULATION CHANNEL)

MEDIA: ROM CARTRIDGE (UP TO EIGHT MEGABITS)

EDITOR'S CHOICE

Akumajou Densetsu

If you're going to experience the best video quality a Famicom has to offer, why not enjoy top quality audio at the same time? The Famicom supported the integration of extra sound channels via the cartridge port, but the NES didn't, meaning that certain Japanese games had better audio than their western counterparts. *Akumajou Densetsu*, or *Castlevania III: Dracula's Curse* in its localised form, is one of them. It happens to be one of the very best platform games on the NES and a standout within its own series, which doesn't hurt either.



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THE SOFTWARE TOOLWORKS

Founded in Walt Bilofsky's garage in 1980, The Software Toolworks blazed a trail across the computing world, pioneering game development and publishing, while giving meaning to revolutionary hardware. Along the way, it grew into a $462 million company, with 600 employees worldwide

Words by Hareth Al Bustani

The Software Toolworks™

Forging Tools for Your Computing Frontiers

Summer 1982 Catalog

Software for Heath/Zenith, 8" CP/M® systems, and Osborne 1®

PROGRAMMING LANGUAGES

C/80 2.0 Compiler generates fast assembly language code — now supports most C features

The new 2.0 release of this powerful programming tool is stronger than ever. Now includes full C structures, pointers and arrays, all storage classes, and data initialization. Compiles all C arithmetic and logical operators, and all control statements, including while, if-then-else, switch-case, and goto. Lacks long and floating data types. Includes source for sample utility programs, and standard C library providing random and sequential file I/O, dynamic storage allocation and selectable profile or trace of program execution. Compiling in one pass, C/80 generates highly efficient 8080 assembly language code for either Macro-80 or the AS absolute assembler. (AS is included with C/80, except HDOS versions which use ASM.) Documentation for compiler and library includes language summary, and complements the language reference manual, Kernighan and Ritchie's *The C Programming Language* (not included). Requires 48K. Order #202; format C8, C5, H5 or O5.
C/80 ..... $49.95

RATFOR adds structured programming features to Microsoft FORTRAN

RATFOR adds the programming ease and readability of structured programming and string macro capability, while retaining the efficiency, power and portability of FORTRAN. The RATFOR translator produces programs which can be compiled and run by Microsoft FORTRAN. Keyed to the book *Software Tools*, RATFOR accepts free format source statements, multiple-statement IFs, IF-THEN-ELSE, and structured WHILE and FOR loops. Compact I/O library avoids huge object modules produced by other RATFOR implementations. Includes documentation, sample programs, and full source code for the RATFOR translator itself, written in RATFOR. Requires Microsoft FORTRAN. Order #213; format C8, C5, H5 or O5.
RATFOR $39.95

More programming languages on following pages.

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SPELL $49.95

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Brave the dangers and meet the challenges as you explore the magic realm of Colossal Cave. You are the adventurer seeking fabulous treasures, mythical adversaries to overcome, and initiation into the secret spells which operate within the cave. The fantasy world is brought to surprising reality by your personal computer as it vividly and amusingly serves as your guide and advisor, describing the sights and sounds about you. Enjoy the satisfaction of discovering the rules within the cave, and solving the puzzles which allow you to explore new regions of this underground realm. Solving all the puzzles of the cave entities you to receive a free serial-numbered Certificate of Wizardness, suitable for framing. The original Adventure program has inspired hundreds of computer game creations. Now you can experience for yourself all the wonders of the original, plus new rooms and treasures, and an improved, expanded ending. Requires 48K, CP/M 2.0 or higher. Order #222; format C8, C5, H5 or O5.
ADVENTURE $19.95

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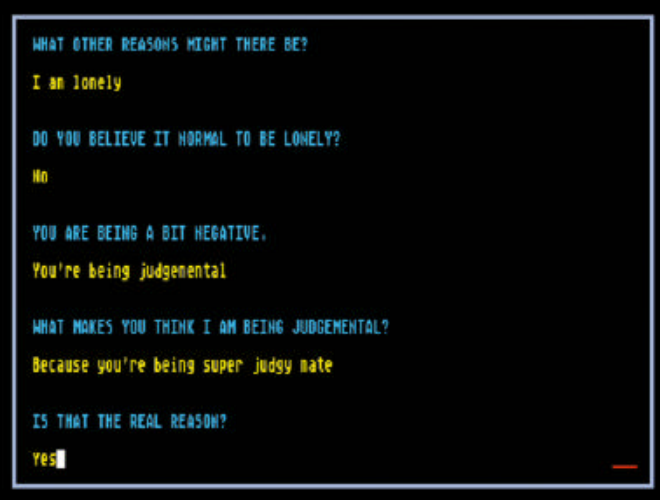
TEXT provides the features of an expensive word processing program, and then some, at a fraction of the cost. Prepare files with PIE or any other text editor, then pass them through TEXT for formatting. Performs fill and justification (straight right margins), pagination, page headers, footers and numbering, indents, centering, underlining, bold print and more. New 4.0 release includes multiple text accumulation buffers for automatic preparation of index and table of contents. Escape sequences may be passed through for printer control without affecting formatting. Inclusion feature allows incorporation of form letters or standard paragraphs from multiple files. Outputs to screen, printer or disk file for complete flexibility. By Dr. Jim Gillogly. Requires 40K. Order #207; format C8, C5 or H5.
TEXT $39.95

More games on following pages.

» With dedicated software stores in short supply, The Software Toolworks initially advertised in Heathkit newsletters, magazines and mail-order catalogues. Credit: Walt Bilofsky/Software Toolworks

Walt Bilofsky was never one to tread familiar ground. At high school, he caused a minor stir, when he hacked his maths teacher's IBM 1620, swapping out the "program loaded" message for a "snarky" one. Studying at Cornell and MIT, he blossomed into a brilliant programmer, working at the Institute For Defense Analyses in Princeton before becoming a consultant. At the advent of the microcomputer age, he purchased and soldered together one of the first Heathkit H-89 8-bit computers and, facing a lack of software, decided to develop and port his own – including a fullscreen editor and a compiler. "Wanting to share the goodies, I called the Heath Company and asked if they were interested in marketing the programs. Their visionary answer was, 'The computer comes with the BASIC language and an operating system, and that's all the software anyone needs.'"


WHAT OTHER REASONS MIGHT THERE BE?
I am lonely
DO YOU BELIEVE IT NORMAL TO BE LONELY?
No
YOU ARE BEING A BIT NEGATIVE.
You're being judgemental
WHAT MAKES YOU THINK I AM BEING JUDGEMENTAL?
Because you're being super judgy mate
IS THAT THE REAL REASON?
Yes

» [Amiga] Walt paid $75 to licence the AI psychiatrist ELIZA, first created by Professor Joseph Weizenbaum, who he knew from MIT.

Undeterred, Walt advertised in the Heath computer hobbyist newsletter, *BUSS*. "Cheques started arriving in the mail and I was in the software business," he tells us." In June 1980, he advertised in *Byte* magazine, under the name The Software Toolworks, and with that, a company was born. Its motto would reflect Walt's philosophy: "without software, it's just a paperweight". It was a bold statement of intent for a group of computer scientists writing programmes for the H-89 in Walt's Sherman Oaks garage – converted into two rooms, featuring a disk duplicator, shelving and a shipping area. "But by the end of the year, Jim Gillogly had published *Airport*, an air traffic controller game, Dave Kittinger contributed *MyChess*, and we were in the games business."

Jim also introduced Walt to a curious title called *Adventure* (also known as *Colossal Cave Adventure*). The world's first adventure game, it was developed in 1975 by spelunker and programmer, William Crowther, for his daughters. A text-based cave exploration simulator, paired with elements of fantasy role-playing, it was later discovered on a Stanford AI Lab computer by researcher Don Woods, who tripled it in size after getting stuck. "I'd loved the experience up until then, and had ideas for ways to improve the game, not the least of which was to fix whatever bug had allowed me to get stuck," recalls Don.

Don's version sparked off a storm, spawning a bevy of mods and clones. "The revolutionary moment was around 1982 when Jim was able to use my C/80 compiler to cram *Adventure* into a computer with 48 kilobytes of RAM and a 90-kilobyte floppy drive," recalls Walt. With *Adventure* in the public domain, Walt decided to produce an 'official' version,

» [PC] After acquiring Mindscape, Software Toolworks successfully secured a rare Nintendo licence, developing education products set in the *Mario* universe.

expanding it, with the approval of both Don Woods and William Crowther. Instead of simply being carried off into the sunset by elves, players were now admitted into the Wizards' Guild, and handed a password. This could be posted to Toolworks, in return for a 'Certificate Of Wizardness', adorned with signatures of Will and Don, and the Toolworks corporate seal – "the only thing it was ever used for".

Toolworks' *Adventure* was released in 1982, sold by mail order, and at trade shows and computer fairs for around $20 – packaged with manuals in Ziploc bags. Catalogues were posted directly to hardware users, desperate for new software. The next year, Walt was joined by his cousin, Joe Abrams, who says the team shared in all tasks equally; tech support, sales and accounting, while Walt programmed "in the other end of the house".

Before long, Software Toolworks products were stocked at more than 50 Heathkit stores. With sales accumulating, the company moved into a three-room office. Among its most notable titles of the era was ELIZA, which Walt describes as "a crude computer 'psychiatrist' that appeared to converse with the user". It featured an interactive script, which users could make changes to.

In 1984, Les Crane, who owned Software Country, licensed ELIZA and *Adventure*, for his major software title, *Software Golden Oldies Vol 1*. Soon after, Les and Joe struck a deal, where Software Country would market a chess game developed by Toolworks. Mike Duffy, who had ported *MyChess* to the IBM PC and PCjr, was brought onto the project – called *Chessmaster 2000*. While Dave Kittinger developed the engine, Walt created the user interface, and Mike handled program control.

"The high concept was that 'playing chess on your computer should be just like playing it with a friend', Mike explains. "So, we had a '3D' chess board and pieces, which you could pick up with your mouse – also a new concept – and drop back onto the board." Though MS-DOS did not support multitasking, Mike used coroutines to allow the chess engine to be interrupted to respond to user inputs.

Boasting state-of-the-art 320x200, four-colour graphics, "representing a lot of effort on Walt's part", *Chessmaster 2000* was a milestone. When Walt found out Les had spent $10,000 to produce the cover photo, featuring actor Will Hare as the Chessmaster, he realised "it was the emphatic end of the Ziploc bag era". *Chessmaster 2000* would sell 100,000 copies in just seven months, marking the start of an auspicious merger between Software Toolworks and Software Country – capped with the purchase of Priority Software Packaging, a disk duplicator and software packager.

In 1987, Les devised a typing application, Mavis Beacon Teaches Typing – centred on a fictional typing instructor, Mavis Beacon, depicted by the real-life model, Renée L'Espérance. Mike, who developed the game with Walt and colleague Norman Worthington, says this time the concept was: "The world's best typing teacher, Mavis, is sitting right next to you, correcting your mistakes." The trio developed the game for PC, from Walt's home – embodying Toolworks' tongue-in-cheek rule of "three programmers, six months". Some weeks Mike clocked more than 140 hours.

"We all knew that the secret to typing skill was to establish muscle memory through repetition, so the real question was how to make that fun and interesting enough to sustain people." The key to achieving this was threefold; commissioning a large ▶

TIMELINE

1979 ■ Walt Bilofsky purchases and solders together his first Heathkit H-89 and begins developing and porting software, including a C compiler and a fullscreen editor.

1980 ■ Walt starts advertising his software to hobbyists in the Heathkit newsletter, *BUSS* – later adopting the name, The Software Toolworks. He converts his garage into an office, bringing in Interactive and RAND scientists. Jim Gillogly publishes *Airport* and Dave Kittinger develops *MyChess*.

1981 ■ As momentum continues to build, Walt coins the iconic catchphrase, "without software, it's just a paperweight". While he develops the artificial intelligence psychiatrist adaptation ELIZA, Robert Wesson makes the *Pac-Man* clone, *Munchkin*, and ports *Invaders* to the H-89.

1982 ■ Jim Gillogly ports *Adventure* to UNIX, and Bilofsky asks Don Woods and William Crowther for permission to complete and release an 'official' licensed version. He extends the ending, which allows players to join the Wizards' Guild, and receive an official certificate.

1983 ■ Walt's cousin, Joe Abrams, joins the company, which moves into an office opposite the Sherman Oaks Galleria.

1984 ■ Over 40 products have been brought to market, including a line of novelty chocolate disks, called Chocolate Bytes.

1985 ■ Les Crane's Software Country licenses *Adventure* and ELIZA, and includes them on the classic compilation, *Golden Oldies Vol I*.

1986 ■ The Software Toolworks develops *Chessmaster 2000*, which Software Country markets. The game sells 100,000 copies in just over half a year and wins the Software Publisher's Association Entertainment Product Of The Year. The two companies later merge, under the Software Toolworks banner. This new entity purchases disk duplicator and software packager, Priority Software Packaging, which not only serves Toolworks, but also other industry giants.

1987 ■ Mavis Beacon Teaches Typing is developed by three programmers in six months, from Walt Bilofsky's home. Electronic Arts becomes the company's sole US distributor, requiring it to port games to all formats.

1988 ■ Toolworks goes public, simultaneously purchasing IntelliCreations and striking a deal with PC manufacturer, Vendex, to bundle software and games in with new computers.

1989 ■ The company acquires DS Technologies. By this time *Chessmaster* and Mavis Beacon Teaches Typing have sold or licensed 750,000 copies.

1990 ■ Software Toolworks acquires British developer Mindscape, giving it a highly-prized Nintendo licence. The Miracle Piano Teaching System is released, tying up capital in physical keyboards, just as Nintendo prices begin to drop.

1992 ■ The company releases Nintendo education game, *Mario Is Missing!* and licenses the first three LucasArts CD-ROM titles. Leveraging partnerships with original equipment manufacturers, it bundles the games in with drives – selling more copies in a month than LucasArts did in two years.

1994 ■ In just six years, turnover has grown from $2,000,000 to $150,000,000 and from 45 employees to 600 employees, worldwide. British publishing firm Pearson Plc buys the company for $462 million and rebrands it under Mindscape.

» The first 10,000 copies of Mavis Beacon Teaches Typing included a photo of 'Mavis Beacon' walking alongside Joe Abrams' son, Matt.

WHERE ARE THEY NOW?

Walt Bilofsky

■ After selling Software Toolworks, Walt developed a freeware tide prediction Palm Pilot app – which inventor Jeff Hawkins called his favourite third-party app. Having helped pass 40 local smoking laws in Massachusetts and California, in 2003, he won a Clean Air Champion award. Since retiring at 73, he has travelled to 91 countries with his wife, Nancy, exhibiting and selling travel photos, and has been on the Treasure Island Museum board for 22 years.

Joe Abrams

■ Joe went on to cofound Intermix Media, the parent company of MySpace, which sold to News Corp in 2005 for $580 million. Today he is a board member of New Zealand-based mobile game developer and publisher, PikPok Games, as well as plant-based natural beverage firm ABS, and Restore Medical, which he cofounded. The 67-year-old is also on the board of trustees for the nonprofit University Of Rochester and Marin General Hospital.

Mike Duffy

■ Following the Pearson sale, Mike Duffy transitioned from chief technical officer to general manager of the games division. After a stint at American Healthcare Finance, he became a founding partner in healthcare technology firm Leprechaun, which sold for $90 million. He later worked as chief software architect at Anti-Gravity Treadmill company, AlterG, before developing MMORPGS for Cryptic Studios. Today, the 64-year-old is senior software engineer at Global Worldwide, and a principal at Michael E Duffy & Associates.

» [Amiga] *Chessmaster 2000* married state-of-the-art 320x200 four-colour graphics with a smart interface, centred around a dynamic chess engine.

» [PC] Software Toolworks employed a brilliant strategy of licensing CD-ROM titles, and having hardware partners bundle them in with drives.
Credit: mocagh.org (Museum Of Computer Adventure Game History)

» [PC] When LucasArts struggled to sell its early CD-ROMs, Toolworks licensed them, and made deals with hardware providers, bundling them in with the drives themselves.

THE DNA OF SOFTWARE TOOLWORKS

SOFTWARE FOR EVERYONE

■ Born in the golden age of microcomputing, The Software Toolworks was created to give purpose to hardware. From Walt's earliest software, through *Adventure*, Mavis Beacon Teaches Typing, *Chessmaster 2000*, the Miracle Piano Teaching System and *Mario Is Missing!*, the company placed fun and purposeful games at its heart – producing useful tools, at affordable prices.

SMART LICENSING

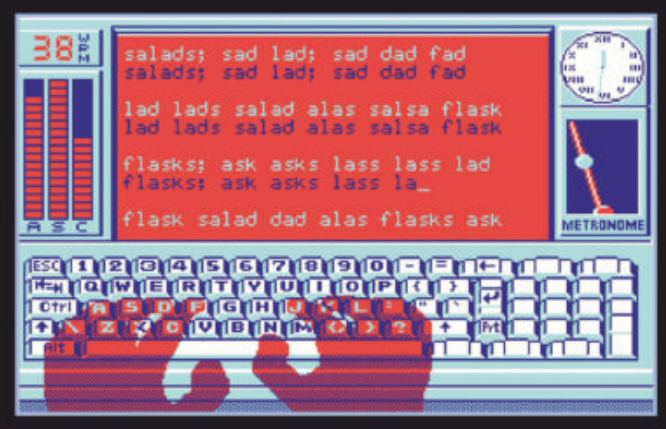
■ After obtaining permission from William Crowther and Don Woods to produce an 'official' version of *Adventure*, Walt Bilofsky went on to secure the rights to ELIZA For $75. The company would later masterfully obtain rare Nintendo licences to produce *Super Mario* educational games, such as *Mario Is Missing!* and release several LucasArts games, including *Star Wars Chess*.

amount of interesting text, providing analysis of user mistakes and keeping the process visually appealing. "The on-screen hands and fingers," explains Mike, "were at the very edge of what was technically possible."

In the social climate of the Eighties, Joe Abrams says the choice of a black woman for Mavis Beacon proved "very controversial". Initial orders were cut back by 50 per cent, because "retailers were reluctant to carry the product". However, after a rave review in the New York Times, things rapidly changed. "I was in the office at 6AM the day the review was published. The phone was ringing off the hook with people asking where they could buy the product. I gave them a list of stores that had originally declined to carry the product. Within two weeks we had full distribution and it was off to the races."

The myth of Mavis, Toolworks' "Betty Crocker", proved a masterstroke, soaring to unprecedented heights. "We never told people that Mavis was a fictional character," Joe confesses. "I remember at the first Consumer Electronics Show after launch, a competitor came up to me and asked how we got the endorsement. He said he had been trying to get her endorsement for years. That's when I knew we had something special."

» [Mega-CD] *Star Wars Chess* was a neat spin-off for LucasArts which featured classic characters like Boba Fett, Chewbacca and Seven Of Nine.


38 WPM
salads; sad lad; sad dad fad
salads; sad lad; sad dad fad
lad lads salad alas salsa flask
lad lads salad alas salsa flask
flasks; ask asks lass lass lad
flasks; ask asks lass la_
flask salad dad alas flasks ask
METRONOME

» [Amiga] Mavis Beacon Teaches Typing breathed new life into the growing, yet stale, typing genre, with bold graphics, minigames and metrics.

However, heightened success brought its own share of challenges, with the company's exclusive US distributor, Electronic Arts, asking it to produce games on all formats. "We were supporting Apple II, Apple III, Apple IIGS, Mac, PC (monochrome and colour), PCjr, Atari 8-bit, Atari ST, Commodore 64, Amiga, and others." One team member would port a version each, which, "for a company financed only with sweat equity", Joe says, "was becoming a challenge". By late 1987, after "all traditional means of financing had dried up", the company went public, raising capital and expanding into new markets.

Yet, The Software Toolworks' most ambitious project was yet to come – the music world's very own Mavis Beacon, the Miracle Piano Teaching System. While the software was simple enough – introducing the concepts of notes and rhythm in a relatively simple manner, before building towards full, orchestral songs – this project would see the company invest heavily in hardware.

"The decision to get into hardware was based on a good intention," says Mike Duffy, "which paved our particular road to hell. The good intention was to make it trivially easy to connect a digital keyboard to a PC or console – specifically the Nintendo. At the time, you had to know about MIDI and serial I/O and keyboards if you wanted to connect a keyboard to your PC.

"Based on our optimistic estimates of the size of the potential market, and the fact that hardware is cheaper if you make lots of it, we ended up having a lot of money tied up in inventory, which nearly sank the company." Although Toolworks ordered 100,000 pressure-sensitive keyboards, many were damaged in shipping, and Miracle Piano Teaching's crucial NES launch coincided with a drop in Nintendo cartridge prices. With the product costing between $300 and $500, Joe laments: "We had a great product at too high a price."

Licking its wounds, the company doubled down on software. Setting its sights on a rare Nintendo licence, it acquired the developer Mindscape, which already had one. It went on to develop *Mario Is Missing!*, an educational game, with Luigi in his debut starring role – where children learn about geography, hunting down stolen treasures across the world, in order to rescue the kidnapped Mario.

The company also developed relationships with original equipment manufacturers in Japan, where the CEO of Phillips computers introduced Joe Abrams to CD-ROM drives – which, at that point, were still primarily sold to companies, libraries and government agencies for high volume data backups. "LucasArts had just completed a trio of CD-ROM games. They were high quality but with no drives as an installed base they sold very few. I convinced them to license us the games and we included them with the first PCs with CD-ROM drives. We sold more in a month than they had sold in two years," Joe muses.

The company had opened up offices across the planet. "From 1988 to 1994," says Joe, "we grew from $2,000,000 in annual turnover to $150,000,000 in annual turnover, and to 600 employees and contractors worldwide." In 1994, British publisher Pearson Plc, purchased the company for $462 million – rebranding it under the Mindscape moniker, only to sell it to The Learning Company in 1998.

Looking back, Walt recalls: "Toolworks' first catalogue of H-89 software in 1980 began by saying, 'This software was developed by computer science professionals for our own use. They are the tools we wanted to have, and we want you to be able to enjoy them too at a reasonable price.'

"Our first products were developed because there was very little software, and that was expensive, so we wrote our own. The few who were buying computers just wanted the new gadget, and then they were hungry for software that would let them do something. After a few years, people were buying computers in order to run the software. We helped make that happen."

GAMIFICATION

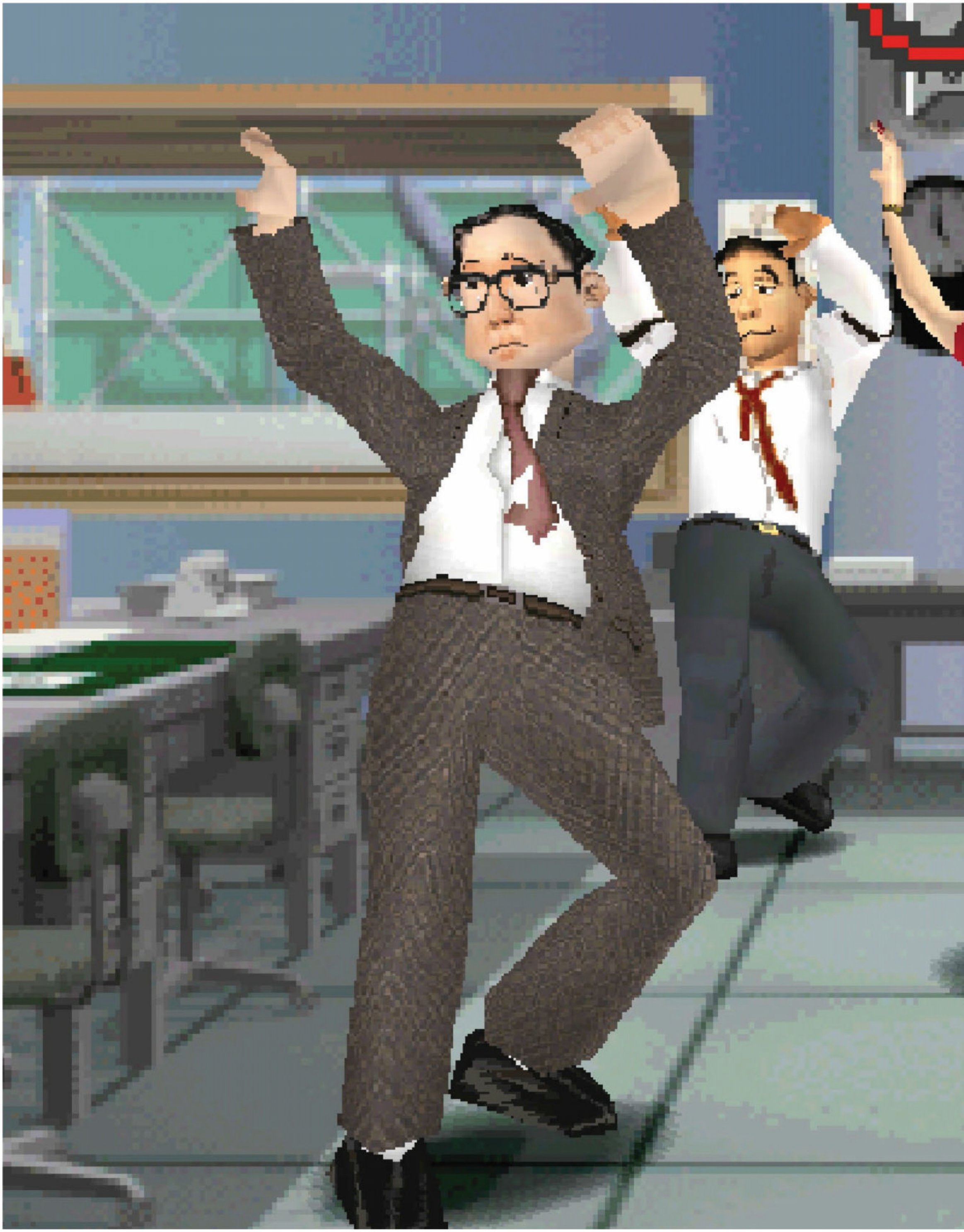
■ Although it sounds like a no-brainer, The Software Toolworks constantly spotted gaps in the software market, and figured out how to make them fun. While typing software was in high demand, Mavis Beacon not only delivered muscle memory exercises, but attached games and metrics to them. The Miracle Piano Teaching System did the same for music.

MERGERS AND ACQUISITIONS

■ After the remarkable success of the *Golden Oldies* and *Chessmaster 2000* collaborations, The Software Toolworks merged with Software Country, before purchasing disk duplicator and software packaging firm Priority Software Packaging. After going public, the company went on to purchase companies in the UK and France, scooping up titles and licences in the process.

OEMS

■ The Software Toolworks began working with Japanese original equipment manufacturers (OEMs) in the Eighties, introducing the company to the CD-ROM format. While other developers – such as LucasArts – developed strong CD-ROM titles, they could not move them. Toolworks, however, leveraged its relationships with OEMs, to bundle its software in with disc drives, helping to start the business.



Incredible Crisis

IT'S BUSINESS TIME

» PLAYSTATION » 2000 » POLYGON MAGIC

Though some might contest whether the PlayStation truly deserves the accolade of 'bringing gaming into the mainstream' (didn't *Space Invaders* and *Pac-Man* do that 15 years earlier?), it was undoubtedly responsible for serving up some surreal slices of Japanese game design to a much wider audience. The rhythmic minimalism of *Vib Ribbon*, *Parappa* and its canine rapping and the bonkers *Bishi Bashi Special* were all brilliant, and I still regret failing to convince my wife that we should recreate the 'Hyper Pie Throw' challenge from the latter at our wedding.

Incredible Crisis is a minigame compilation of sorts but with a strong overarching narrative tying together the minute-long challenges. The storyline of 'getting home for Granny's birthday meal' might not seem strong, but the increasingly bizarre events which conspire against each family member making it to the party on time never fail to amuse and surprise. Whether stuck in a plummeting lift, getting mixed up in a bank robbery or caught on the frontline of an alien invasion, each scenario is shot through with a dark sense of humour.

The several dozen minigames do tend to require a fair amount of frantic button-bashing and QTE-style responses but they're dressed up so imaginatively that they all feel different. And any game that features a section involving a femme fatale tempting you onto a Ferris wheel to give her a 'back rub', with her issuing very breathy instructions to go 'a little bit further down' before purring out 'there…' must be worth investigating.

Revisiting this charming oddity 20 years on, I've also realised how much I now empathise with Taneo, the father of the family, as he desperately tries to escape his office. As I help him flee a giant runaway wrecking ball and answer quick-fire quiz questions to fend off trivia-obsessed, electric shock-issuing paramedics, it feels like a knowing wink at the little things that life sends to try us. I do wish my workplace instigated impromptu dance-offs with colleagues, too. ✱

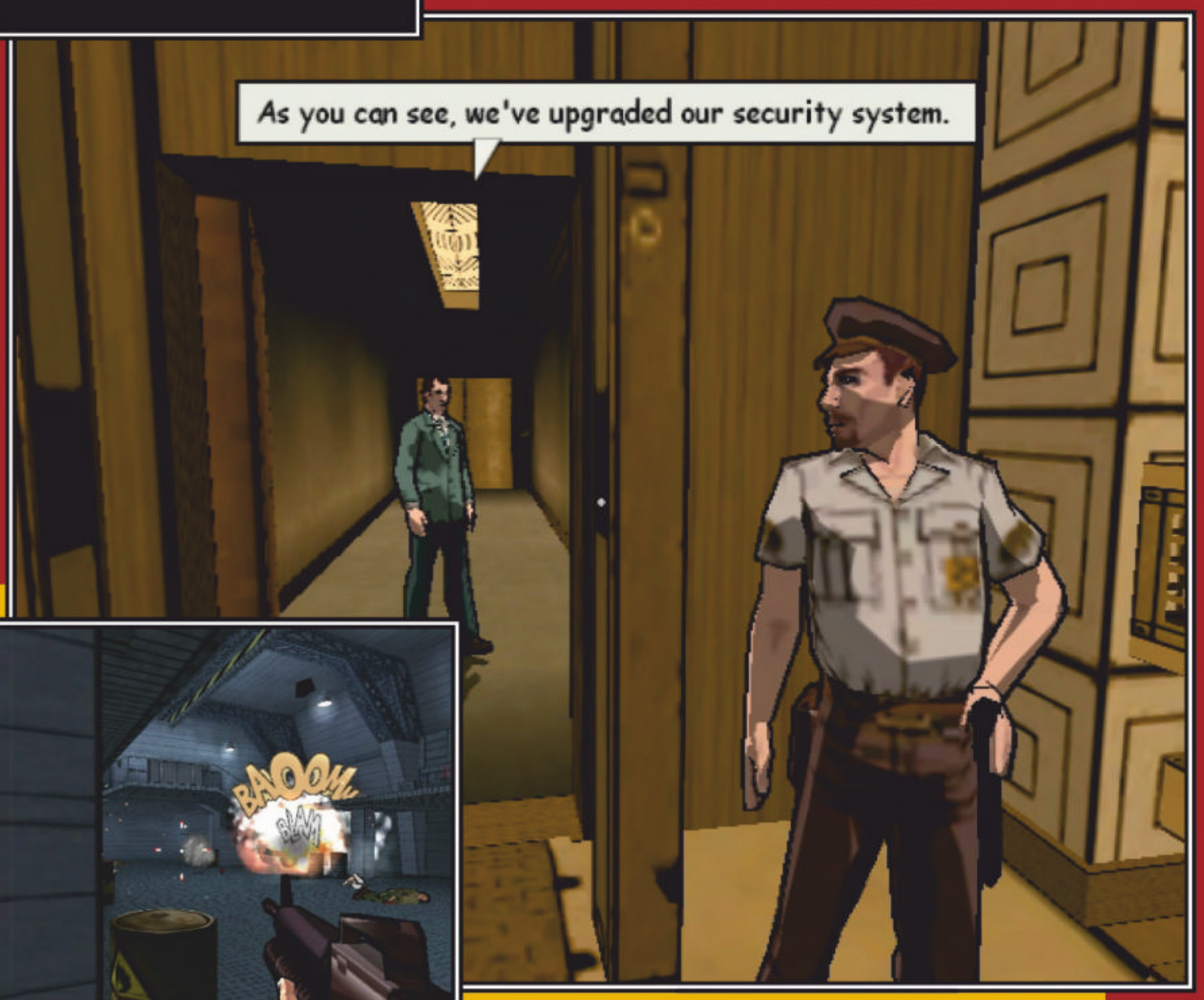
The Making Of XIII

IN THE KNOW

- **PUBLISHER:** UBISOFT
- **DEVELOPER:** UBISOFT PARIS
- **RELEASED:** 2003
- **PLATFORM:** PS2, XBOX, GAMECUBE, PC, MAC
- **GENRE:** FIRST-PERSON SHOOTER

» [GameCube] Cutscenes in *XIII* look like pages ripped out of a comic.

TATATATATATA!



UUUUHHHHH!

» [GameCube] Explosions in *XIII* are a prime example of how the game has fun with its comic book inspirations.

AHEAD OF A HD REMASTER PLANNED FOR NEXT YEAR, WE FIND OUT HOW A BELOVED BELGIUM COMIC BOOK SERIES BECAME AN EYE-CATCHING FIRST-PERSON SHOOTER WITH THE HELP OF TWO MEMBERS OF THE ORIGINAL DEVELOPMENT TEAM: ELISABETH PELLEN AND NATHALIE MOSCHETTI-NOGARD

Words by Paul Walker-Emig

The first thing that strikes you about *XIII* is its style. Even today, 16 years after its original release, the game looks great; at the time, its cel-shaded comic book style was stunning, garnering it plenty of attention. That comic-like aesthetic is now an established style that many popular videogames have employed, but *XIII* came not only at time when the aesthetic was far less established but, as we'll come to explain, implemented it with a flair and consistency that meant it showcased a commitment to comic book visuals beyond just picking something that looked cool.

XIII was based on the first five volumes of a popular Belgian graphic novel of the same name. The comic was created by Jean Van Hamme and tells the story of an amnesiac whose only clue to his past is the Roman numeral XIII, tattooed on his collarbone. He finds himself accused of the murder of the US President and must fight to clear his name and uncover his own past. Ubisoft bought the rights to the comic and tasked a team that included the game's director and writer, Elisabeth Pellen, and art director Nathalie Moschetti-Nogard, to create a first-person shooter videogame version of Van Hamme's tale. "My official role was script writer but I was also in charge of the scripted events, and I created a few levels as well," says Elisabeth. "In 2003 the dev teams were smaller and it was not rare to handle multiple roles on the same production. I was already an Ubisoft employee when it was proposed that I join the core team. I was very excited by the project because it was one of my favourite comic books when I was a pre-teen," Elisabeth continues.

"Previously, I was a 2D graphic designer on educational games for children, then a 3D graphic designer at Ubisoft," Nathalie tells us. "*XIII* was my first position as an art director on a 3D videogame. On this project, there were two women at the head of the graphic team, Nathalie Provost as technical art director and myself as art director, to manage a team of ten to 15 graphic designers." Those roles would prove to be very important; Elisabeth tells us that the team wanted to remain as faithful to the source material as possible, and this began with a strong focus on finding an art style that would properly reflect the comic book source material.

"The art director, Nathalie Moschetti, and the technical art director, Nathalie Provost, shared the same ambition regarding the visual adaptation of the comic book to the game," Elisabeth tells us regarding the logical implementation of *XIII*'s comic book style. "They really wanted to push to an extreme the use of familiar 2D conventions in 3D: cel shading, onomatopoeia, panels. We wanted the player to feel like they were diving through the pages of a comic book."

Nathalie reveals that the implementation of the game's cel-shaded style was challenging, on more than one front. "We had to fight hard to

» [GameCube] The crossbow is one of *XIII*'s handiest weapons, allowing you to take out enemies from a distance in silence.

WAAAAHH

» [GameCube] The cityscapes still look great thanks to the game's timeless art style.

BAM!

» [GameCube] Comic book panels are a great way of highlighting things you can't normally see, like an enemy careening towards the floor after you've knocked them from their perch.

▶ sell the idea of this cel-shaded artistic direction to management, which was rather set on realistic 3D," Nathalie reveals. "With the support of the project manager Julien Barès, and the hard work of the entire design and production team, we managed to impose our original vision in a test map." After convincing the higher-ups at Ubisoft that a cel-shaded style was the way to go, the team then had to deal with the substantial technical challenge of implementing it.

"I did a lot of research to find graphical gateways between the original comic, clear lines and 3D rendering," Nathalie explains. "The environments, voluntarily monochromatic, had to bring out the dynamics of cel shading, which had to be the 'wow effect' of the game and thus create coherence with the original comic. We had to develop the technique of cel shading internally," Nathalie continues. "There were already some promising tests that existed, thanks to our super graphic engineer! All the work of artistic direction was to deal with the rather enormous technical constraints, because the cel shading was very greedy, especially in real time, and we had to adapt constantly to create a coherent rendering, without looking too 'low polygon'." Nathalie describes the constraints of the consoles they were working on – the game was released on PC, PlayStation 2, Xbox and GameCube – as "huge for the graphical ambition we were aiming for" and says that, for her, keeping the right level of consistency in the game's graphical quality throughout in face of these limitations was the biggest challenge she faced during the game's development. "I draw a certain pride from this," Nathalie says. "To emerge with an original artistic vision, singular, but coherent, while bypassing the constraints, it was an interesting challenge!"

Nathalie remarks that she herself is surprised at just how well *XIII* has aged when she looks at it today and, taken in combination with the way that its style grabbed attention back in 2003, it would seem that Nathalie and the team were right to fight for their distinctive vision of how the game should look.

XIII is far from the only game we've seen by this point to use a cel-shaded art style. However, its approach to that style does make it stand out from many other that have used the approach since. Whereas, for other games, a comic book style is simply a visual choice, *XIII* makes a real effort to incorporate the idea of it being a comic into its gameplay mechanics. Comic book panels will appear on the screen to draw your attention in a particular direction, or show something happening in the distance. When you crouch down, the onomatopoeic tapping of enemy footsteps function as a stealth mechanic to help you keep tabs on where they are lurking while you're hidden behind cover. These are just a couple of examples of the many ideas in *XIII* that showcase a united vision coming from what Elisabeth and Nathalie describe as a tight-knit team.

"THE CEL SHADING WAS VERY GREEDY, ESPECIALLY IN REAL TIME, AND WE HAD TO ADAPT CONSTANTLY TO CREATE A COHERENT RENDERING, WITHOUT LOOKING TOO 'LOW POLYGON'"

NATHALIE MOSCHETTI-NOGARD

"We analysed the comic book's 2D conventions first and then tried to find some solution to adapt them into 3D," Elisabeth recalls. "Some ideas worked better than others. Meanwhile, we were working on the user experience with the game designers. Using onomatopoeias was an efficient way to suggest to players the right direction to take inside open areas without forcing artificial paths. We were also looking for a good way to reward headshots, so we tried the three panel frames displayed in a row," Elisabeth is referring to a mechanic where the results of your sharpshooting flash up in three quick sequential panels, accompanied by an emphatic sound effect. "The result was impactful."

"For us it was necessary to exploit the 2D visual codes of the comic strip – like

» [GameCube] This poor guy probably didn't expect a sniper to crawl out of vent above him.

BOOM!

onomatopoeia, vignetting, typography, etc – as much as possible," says Nathalie. "In consultation with the game designers and level designers, and especially the creative director Elisabeth Pellen, we were able to integrate all these strong signals and thus lead to a coherent, singular and remarkable rendering. This *XIII* style was born at this precise moment when we were able to visualise all these codes together on the same screen, and it worked perfectly."

Fidelity to the source material extended to the game's approach to the story, too. "My goal was to respect as much as possible the original story of Jean Van Hamme, but with a minimum amount of cutscenes," Elisabeth explains. "Which was quite of a challenge. I wanted to bring the iconic characters to life by allowing the players to interact with them. So we worked a lot with the level designers to give the players the feeling that they were the actors of the comic book's universe, and not only a spectator."

This is another area that demonstrates how strong the core team had to be on maintaining its vision for the game, with Elisabeth often having to fight to keep non-playable cutscenes to a minimum. "The biggest challenge on my side was to convince a part of the team to replace the cutscenes with scripted events and interruptible dialogues and animations," she remembers. "One of my favourite parts is the playable flashbacks of the hero," referring to sections of

» Elisabeth was the writer and director of *XIII*. Today she works as VP editorial at Ubisoft.

ELISABETH PELLEN

» Nathalie was the art director of *XIII*, and has worked on Ubisoft's *Splinter Cell* and *Just Dance* franchises.

NATHALIE MOSCHETTI-NOGARD

WRROOAARR

DEVELOPER HIGHLIGHTS

JUST DANCE
SYSTEM: WII
YEAR: 2009

XIII
SYSTEM: VARIOUS
YEAR: 2003

RAYMAN 3: HOODLUM HAVOC
(PICTURED)
SYSTEM: VARIOUS
YEAR: 2003

THROWING SOME CEL-SHADE

More distinctive cartoon-style classics

JET SET RADIO

Released in 2000 on Sega's Dreamcast, this game helped pioneer the cel-shaded style in early videogames. The stylised aesthetic employed by this beloved Dreamcast hit was perfect for a game themed around creating art – your goal was to skate around urban environments coating them in graffiti, whilst avoiding the police.

BORDERLANDS

The *Borderlands* series is perhaps the most famous and successful game series to employ cel shading. Famously, the original game was more realistic in the early stages of development. Gearbox realised it was looking a bit *too* brown and dour, which didn't fit with the game's more outlandish elements, prompting the switch to cel shading.

THE WALKING DEAD

Cel shading was a logical choice for Telltale's most famous comic book adaptation, but it also shows how a simple art style could help, what was at that time, a relatively small team produce a stylish game without spending hundreds of millions of dollars.

THE WIND WAKER

If you needed proof of how well cel-shaded graphics tend to age, look no further than this excellent GameCube entry in the *Legend Of Zelda* series. It aged so well, in fact, that some people argued that the HD Wii U version released in 2013 actually looked worse than the 2002 original.

OKAMI

This PS2 classic is another example of a game switching from a more realistic style, to a less demanding cel-shaded aesthetic. That decision proved to be the right one, producing a stunning achievement that's still revered to this day.

IN MEMORY OF

OUR FAVOURITE MOMENTS FROM XIII

CRAAACK!

SPLITTING HEADS

The satisfying onomatopoeic smash of a spade, chair or other such melee object on an unsuspecting guard stands out in the early sections of *XIII*.

BREAKING THE BANK

As well as some cool flashback moments that tie in with your mission in this bank, this is the first stage that offers you the memorable opportunity of grabbing a hostage and forcing enemies to back off.

HOOKING UP

No spy thriller is worth your time if it doesn't offer you a selection of cool gadgets to play around with. Luckily in *XIII* you get this *James Bond*-esque remote winch that allows you to descend Batman-like from high places.

PERFECT SHOTS

If you manage to land a perfect headshot on an enemy soldier, you're treated to a three-panel flourish, accompanied with a sound effect, showing off their demise. It makes those long-range kills oh so more satisfying.

"SO MANY WOMEN ON XIII, I STILL CAN'T BELIEVE IT. IT WAS PURE COINCIDENCE AND IT NEVER HAPPENED AGAIN"

ELISABETH PELLEN

the game where you jump back in time and play through protagonist XIII's past experiences. "Once again, some colleagues didn't understand why we didn't just use classical cutscenes, but I really wanted the player to enter the memory of XIII because it was the theme of the story."

Clearly, the team behind *XIII* had a lot of ideas and this manifests in the game. There's a variety of locations, mechanics, gadgets, scenarios, clever visual ideas and more. You travel through beaches, banks, cities and snowy military bases. You hang from grappling hooks, take hostages to hold off enemies, escort allies, snipe, sneak and shoot. There's a lot there. This variety is one of the game's strengths, but it could also be argued that it tries to do too much. This is something Elisabeth acknowledges when reflecting on the game's development. "The game was too generous in ideas, for sure, and we required the help of the *Rayman 3* team to help us to polish the last levels in order to ship on time with the right level of quality," she says. "We lacked experience in triple-A production and planning, so it was very hard to give up on our darlings, even if we knew we would never release the game without making sacrifices. The bigger the team became, the better handle on production we gained, but we also gained more opposing points of view on the game direction as well. I had to play the entire game every week to chase the missing dialogue, behaviour bugs and localisation issues."

» [GameCube] Now that's a comic book sound for you – we love those onomatopoeias.

The subject of diversity in videogames is, rightly, one that has come into greater focus in recent years. Given the traditional bias towards men in the industry, it's interesting to note that *XIII*'s team had an uncharacteristically large number of woman on the team. We wonder why that was the case and whether that was unusual?

"[There were] so many women on *XIII*, I still can't believe it," Elisabeth reflects. "It was pure coincidence and it never happened again. What happened to the female developers in the game industry? Where did they all vanish to? They are probably working on a secret project in a parallel universe. I can't wait to play it. It will be probably violent, erotic and hilarious."

"I can confirm that at the time the positions of responsibility were often held by men," says Nathalie, offering her perspective. "I had the opportunity to participate in this relatively mixed production, with some positions of responsibility occupied by women. The director/creative director/screenwriter Elisabeth Pellen, the graphical technical director, Nathalie Provost, and some other graphics staff, sound designers and testers. Even though I've lived through some big moments of inequalities between men and woman on other productions in my career, I believe that the progress of gender diversity is on the way and this is great news."

Elisabeth says the team behind *XIII* was great to work with, though she doesn't feel that having more woman on the team made development substantially different. "Working with women was not very different from working with a team of men," she says. "This is not the first detail that comes back to my mind when somebody reminds me of *XIII*, except that two of those girls became my dearest friends. We had a lot of work to do in a short amount of time, and we were all focused

GET TO THE CHOPPER

XIII features some cool setpiece scenarios, such as one where you start the level descending on your grappling hook to escape an exploding cable car, run a gauntlet of enemies hunting you down, and then hold them off before escaping on a chopper.

» [GameCube] This is why you should check behind you periodically while you're watching TV.

RECREATING XIII

François Coulon, head of production at Microïds reveals how the new HD version of XIII is shaping up

How did the remaster of *XIII* come about?

First, it is an IP from a sister company of ours (Dargaud), which is huge in France and in the world, that we always loved. Also, we were so fond of the original game that we have always wanted to do a remaster. We've been negotiating for many years with Ubisoft and finally got an agreement last year. We were so happy about it!

What has been interesting or surprised you about revisiting the game?

The most amazing thing is to see how the uniqueness of the game hasn't aged. The comic-style presentation, which doesn't only refer to the very nice cel shading (which many games are using nowadays), but also in the gameplay treatment still resonates like crazy to us. For instance, with the use of onomatopoeia, or framed windows for spectacular deaths, and so many other details that makes the player be immersed inside a comic book, and not any comic book but inside *XIII*. That also means a very strong story that still works wonderfully. Also, the nervous FPS is still very fun to play, by offering a large variety of gameplay situations and experiences. I was amazed at having the same reactions of fun, tension, etc as when I originally played it 15 years ago.

Will the remaster be completely faithful to the original or is there anything you plan to tweak (the way it controls, for example)?

The remaster will be totally faithful to the original in terms of story, level design, etc. The only things we will be tweaking lies in a global modernisation being allowed by the current tech. All the graphics will, of course, be enhanced: more polygons and higher resolution for the characters, the world, the props, and so on! Also, the AI will be much better. And that means the combat will be changed: in 2002, we were able to have only four enemies at any moment in the game. This restriction doesn't exist anymore, of course, so you can expect a serious difference here (more enemies, behaving a smarter way). This will lead to an overall better experience.

» [GameCube] Some of *XIII*'s guns have an alternate fire mode. This one can fire a grenade that'll take care of those goons.

on our tasks and challenges. The mood was good among the core team and we all had something to prove, to test, to claim with this project: no cutscenes, unique art direction, the first online mode for Ubisoft. We wanted to create an honest, generous and unique experience for the fans of the comic books and the FPS lovers."

That *XIII* was, as Elisabeth mentions, the first Ubisoft game to feature online multiplayer makes it a significant landmark for the company. The game featured modes with a maximum of 16 players, allowing you to compete in team deathmatches, standard deathmatches, capture the flag, sabotage (which was only available on Xbox and PC) and power-up (which was only available on PC and PS2). By Elisabeth's own admission, "we didn't create the best online mode", but as Ubisoft's first, it was still a significant and important achievement.

Another notable element of the game was its star-studded voice cast. The game starred David Duchovny, just off the back of playing Agent Mulder in the *X-Files*, in its main role, hip-hop artist Eve, who had just won a Grammy the previous year, as Jones and Adam West as General Carrington.

Ultimately, though, credit for the momentum the game built before its release, and the elements that made it stand out, must go to the team of developers behind the game who had a clear vision of what they wanted to do and stuck to their guns when they faced pressure to waver on that vision. That commitment made *XIII* distinct and fresh, if far from perfect.

Indeed, the reception for the game acknowledged the game's overreaching, the fact that, as Elisabeth said, it was "too generous" with ideas. Reviews ranged from glowing to mediocre. Notably, even those with plenty of criticism for the game recognised it as something of a flawed masterpiece, packed with great ideas that didn't always hit the mark. Perhaps the team could have taken a more conservative approach, but we'd take an interesting but flawed game trying out new ideas over a polished but derivative title any day of the week. *XIII* dared to be different and for that it deserves to be celebrated.

RGT

Retro Gamer Travels

LOST IN TRANSLATION

How the rest of the world experienced your favourite games

ROW

JET SET RADIO

JPN → ROW
Japan → ROW

JET SET RADIO
Departing: 2000

FORMAT
Dreamcast

DEVELOPER
Smilebit

YEAR
2000

ORIGIN
Japan

LOCALISED FOR
Rest Of World

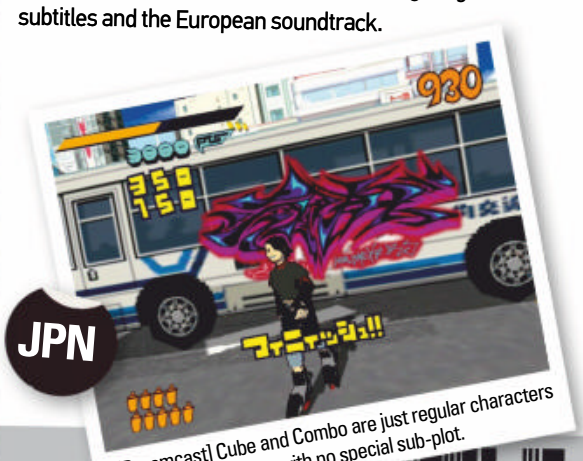
REASONS
Commercial, Difficulty

■ This Dreamcast cult favourite is well known worldwide – few games did more than *Jet Set Radio* to popularise cel shading, a graphical technique that gave a previously unattainable cartoonish appearance to 3D models. What isn't so well known is that the game was heavily revised in the four months between its Japanese and American releases, and received further changes for Europe, in an attempt to make the decidedly Japanese game more appealing.

The original Japanese version of *Jet Set Radio* has the GGs skating their way through three districts of Tokyo-to – Shibuya-cho, Benten-cho and Kogane-cho. Each of these contains a few different areas to explore, and in later stages they're linked into a single, large map. In order to bulk the game out a bit and add some western flavour, Smilebit added Grind City for the international versions. This location consists of two self-contained maps. Bantam Street is fashioned after the Bronx and plays much like the game's other stages, while Grind Square was clearly inspired by Times Square and is unusual in that most of the action takes place above ground level.

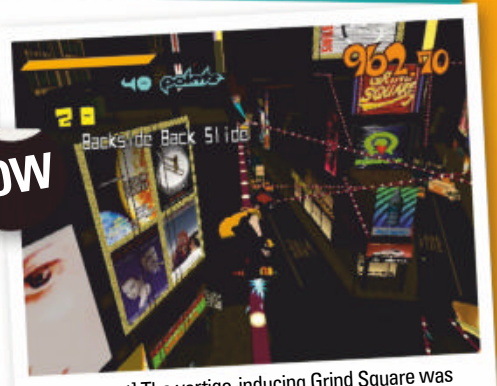
The soundtrack was also given an overhaul, with *Dunny Boy Williamson Show* by Deavid Soul omitted from all international versions. Five tracks were added for the North American release – *Patrol Knob* by Mixmaster Mike, *Improvise* by Jurassic 5, *Slow* by Professional Murder Music, *Just Got Wicked* by Cold and the ubiquitous *Dragula* by Rob Zombie. The European release included the Jurassic 5 and Mixmaster Mike tracks, but dropped the ill-fitting alternative metal and added *Many Styles* by OB One, *Funky Plucker* by Semi Detached and *Recipe For The Perfect Afro* by Feature Cast.

Japanese players later received the new content in an updated version of the game called *De La Jet Set Radio*, featuring the original Japanese voice acting, English subtitles and the European soundtrack.



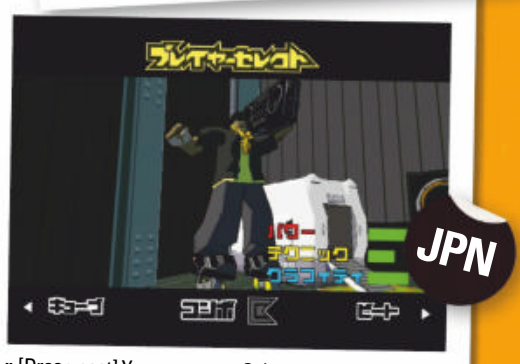
JPN

» [Dreamcast] Cube and Combo are just regular characters in the original release, with no special sub-plot.



ROW

» [Dreamcast] The vertigo-inducing Grind Square was one of the two stages added for international audiences.



JPN

» [Dreamcast] You encounter Cube and Combo earlier in the original Japanese release, as there's no reason to hold them back.

ECONOMY

MICKEY MOUSE II

JPN → ROW
Japan → ROW

FORMAT
Game Boy

DEVELOPER
Kotobuki Systems

YEAR
1991

ORIGIN
USA

LOCALISED FOR
Rest Of World

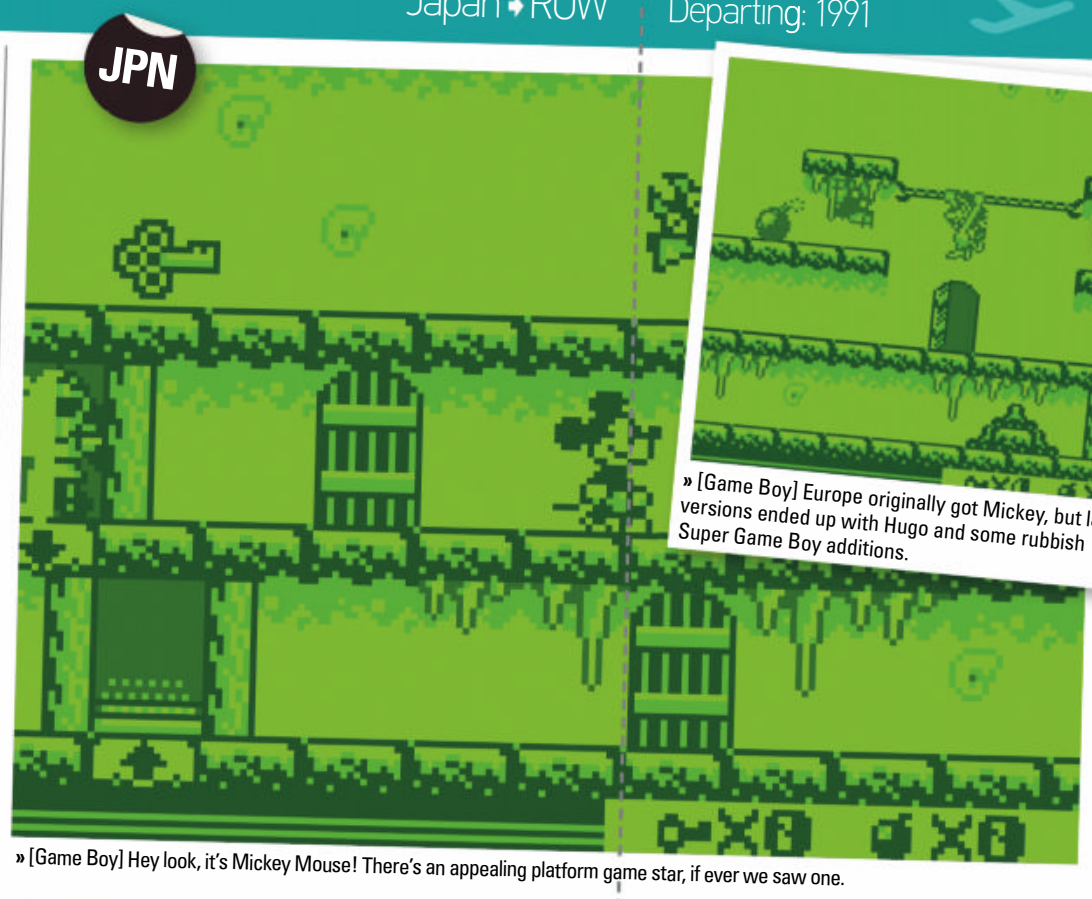
REASONS
Commercial

ECONOMY

So here's a convoluted little licensing tale. Kemco had the rights to make a sequel to its popular *Mickey Mouse* game in Japan, so it did – and in a show of highly imaginative thinking, Kemco called it *Mickey Mouse II*. The company hadn't released the original game in Europe, so it released it there as *Mickey Mouse*, with minimal title screen changes. So far, so good. But Kemco didn't have a Disney licence for North America, and instead had *Looney Tunes*. No problem – just as *The Bugs Bunny Crazy Castle* had been a localised version of *Mickey Mouse*, *Mickey Mouse II* became *The Bugs Bunny Crazy Castle II*.

But wait! The game was relocalised for Europe in 1996, now featuring irritating TV phone-in star Hugo The Troll. This version gained Super Game Boy support and a little bit of an audio overhaul. The game then came back to Japan in 1997, but in the form of the previously American-exclusive *The Bugs Bunny Crazy Castle II*, as part of the *Bugs Bunny Collection*. This version also featured Super Game Boy support, but kept the action black and white rather than using Hugo's underwhelming palettes, and featured considerably nicer *Looney Tunes* borders.

MICKEY MOUSE II
Departing: 1991



» [Game Boy] Hey look, it's Mickey Mouse! There's an appealing platform game star, if ever we saw one.

» [Game Boy] Europe originally got Mickey, but later versions ended up with Hugo and some rubbish Super Game Boy additions.

ALEX KIDD: TENKUU MAJOU

JPN → ROW
Japan → ROW

FORMAT
Mega Drive

DEVELOPER
Sega

YEAR
1988

ORIGIN
Japan

LOCALISED FOR
Rest of world

REASONS
Sexual content

ECONOMY

■ **One of the more distinctive things about the *Alex Kidd* series was its use of rock-paper-scissors as a game mechanic.** This somewhat random game was initially used for boss battles in *Alex Kidd In Miracle World*, creating a huge reliance on luck for progression – although you could memorise the correct choices. This is ultimately one of the few knocks against one of the better platform games of the era, especially on the Master System. Still, it somehow made its return when Sega revisited the series on the Mega Drive.

On the Master System, losing a game of janken – *Alex Kidd* used the Japanese name, even in English – would see Alex turned to stone, resulting in the loss of a life. For some reason, this was changed in the Japanese version. Janken matches now required a bet, and either player could lose their shirt – quite literally, as losing a game of janken would see them stripped naked, with only a fig leaf to preserve their dignity. Would this fly with western audiences? No, Sega decided, it would not. The game was altered to crush the loser to death with a cartoon weight instead, because comic violence is more socially acceptable than comic nudity.

ALEX KIDD: TENKUU MAJOU
Departing: 1988

» [Mega Drive] Alex, rather embarrassed by his nudity in front of a jeering audience, exits stage left.

» [Mega Drive] Alex, having been crushed so badly that his eyes have merged with the weight, exits stage left.

» [PC] All eyes are on you, don't go finishing last now.

PACER

FEW THINGS IN LIFE ARE GUARANTEED: THE SUN RISING, THAT'S ONE, DARRAN USING THE WORD 'SENSATIONAL', IS ANOTHER. A NEW WIPEOUT GAME, THOUGH, IS NOT LOOKING LIKELY. WE SPEAK TO GAME DESIGNER CARLTON GAUNT OF R8 GAMES WHICH IS AIMING TO PROVIDE WHAT IS LOOKING LIKE A TASTY ALTERNATIVE

Words by Martin Hinson

The anti-gravity racer feels like something of a starved genre. We have seen titles come and go, such as *Fast RMX* and *Redout,* but nothing that has really had the quality to satisfy those of us craving a brand-new *WipEout* or *F-Zero* title. Enter, R8 Games, a studio aiming to fulfil this desire and satisfy the keenest anti-grav racing fans.

R8 Games is a collection of approximately 20 people, with a mix of graduates from the University Of Teesside and seasoned industry veterans. "The studio was founded with the idea to create a futuristic anti-gravity racer that played as we remember older sci-fi racers feeling – something that had a little grit in it and demanded skill in play," explains *Pacer* game designer, Carlton Gaunt. "A lot of us grew up in the height of sci-fi racing and remember early *WipEout* and *F-Zero* games fondly, but there seemed to be a big gap in the market, so we set out to bring what we remember AG [anti-gravity] racing being to a new crowd with modern development tools," he adds.

Futuristic racers seem to be notoriously difficult to nail that 'feeling', however R8 Games seems to have found the right balance of industry pedigree and fresh talent. "We've had people working on *Pacer* throughout its development who, without naming specific names, have worked in some form on the genre's biggest IPs,"

"IT'S VERY MUCH ITS OWN ENTITY, BUT THERE ARE OBVIOUS NODS TO BOTH WIPEOUT AND F-ZERO IN PLAY"

Carlton Gaunt

IN THE KNOW

- **» PUBLISHER:** R8 GAMES
- **» DEVELOPER:** R8 GAMES
- **» RELEASE:** 2019 (CONSOLES)
- **» PLATFORM:** PC, PS4, XBOX ONE
- **» GENRE:** RACING

Carlton reveals. "So I can safely say we have a good combination of people who previously worked on futuristic racers alongside some fresher faces who grew up playing them.

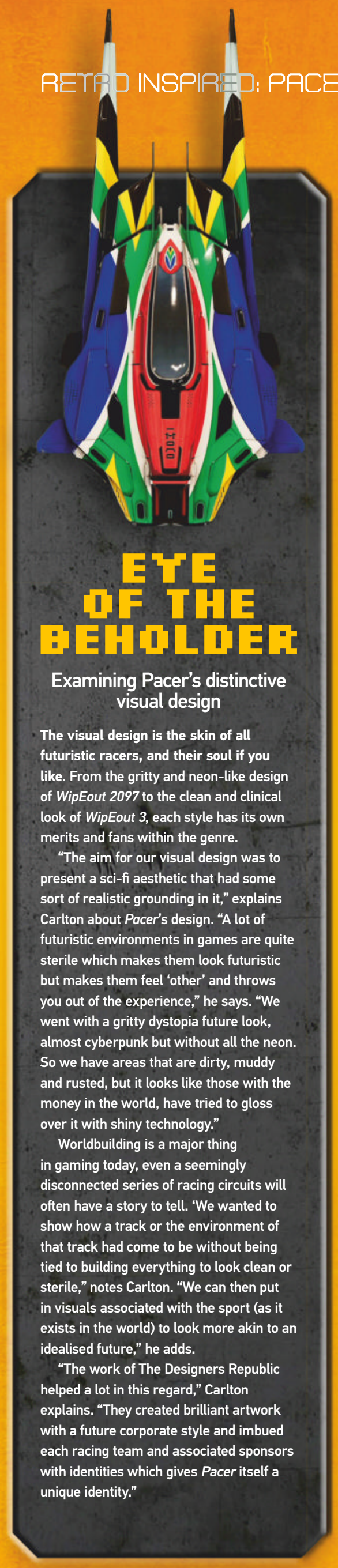
Pacer originally started out under the name '*Formula Fusion*' and entered a lengthy early access period. When it became clear from user feedback that the game wasn't exactly up to scratch, R8 took it off sale and rallied behind its design ethos to create a game that was worthy of carrying on the *WipEout* legacy. Following some significant development overhauls, and a name change, *Pacer* is now due for a wide release this year on home consoles.

The time we have spent with *Pacer* is suggesting this balance of genre experience and fresh eyes is finally paying off. Currently the game is feeling much like the new *WipEout* game fans have been craving for many years. However, Carlton is keen to show that *Pacer* is not a mere spiritual successor. "I don't think I'd pitch it as a sequel, whether spiritual or otherwise, but it certainly has a familiar spirit," he states. "It's very much its own entity, but there are obvious nods to both *WipEout* and *F-Zero* in play, both because this is unavoidable within what is quite a tight genre that for such a long time was dominated by these two giants, but also because they're both franchises we love, so tipping our hats to them almost feels like a duty we'd never wish to ignore," muses Carlton.

With that in mind, we need to look at arguably the most important aspect of the genre, the handling model. Due to the variables of speed, weight and pitch that needs to be taken into consideration, this is notoriously difficult to get right as Carlton explains. "Our first method was to get something that responded immediately, but the physics of the world would allow things to 'taper-off' to the point of reaction. So, when you press a button or pull a trigger the craft responds, but the properties of the craft – aerodynamics, hover strength, speed – versus the resistances of the world, like gravity, air resistance, etc, mean that there would be a 'looseness' to them – a slight delay or offset before the result of that action bears out. It's similar to how a car in a drift game would have a low traction, or a dune buggy would have a suspension that allowed a lot of 'bounce'."

The team is also clearly enjoying the challenges in creating a handling model offered by such high speed anti-gravity racing. "We have other opportunities not available to grounded vehicles such as how the craft rolls and where on the craft they turn about when steering," explains Carlton. "Without any connection to the ground we have much more freedom in how we show a

» [PC] *Pacer*'s speed can take your breath away at times.



EYE OF THE BEHOLDER

Examining Pacer's distinctive visual design

The visual design is the skin of all futuristic racers, and their soul if you like. From the gritty and neon-like design of *WipEout 2097* to the clean and clinical look of *WipEout 3*, each style has its own merits and fans within the genre.

"The aim for our visual design was to present a sci-fi aesthetic that had some sort of realistic grounding in it," explains Carlton about *Pacer*'s design. "A lot of futuristic environments in games are quite sterile which makes them look futuristic but makes them feel 'other' and throws you out of the experience," he says. "We went with a gritty dystopia future look, almost cyberpunk but without all the neon. So we have areas that are dirty, muddy and rusted, but it looks like those with the money in the world, have tried to gloss over it with shiny technology."

Worldbuilding is a major thing in gaming today, even a seemingly disconnected series of racing circuits will often have a story to tell. 'We wanted to show how a track or the environment of that track had come to be without being tied to building everything to look clean or sterile," notes Carlton. "We can then put in visuals associated with the sport (as it exists in the world) to look more akin to an idealised future," he adds.

"The work of The Designers Republic helped a lot in this regard," Carlton explains. "They created brilliant artwork with a future corporate style and imbued each racing team and associated sponsors with identities which gives *Pacer* itself a unique identity."

THE COMPETITION

Here are a few alternatives you could be taking for a spin

FAST RMX

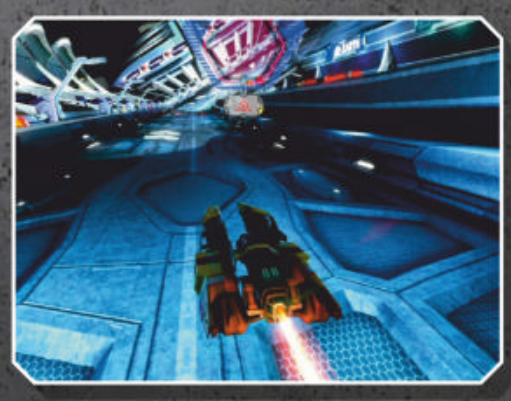
■ Released for Switch on launch day in 2017, *Fast RMX* is a port of the Wii U title *Fast Racing Neo* and it's more in the *F-Zero* mould than *WipEout*. Though visually impressive with a 60fps target, *Fast RMX* never really gets into a good flow due to a frustrating, stop-start boost system and clumsy course design.

REDOUT

■ First released for PC back in 2016, this racer was ported to consoles in 2017 with mixed results. Performance is inconsistent, particularly on base consoles, which damages what is a good racer with tight controls and great art design. It's worth a look if you have a PS4 Pro, Xbox One X or a decent PC.

WIPEOUT: THE OMEGA COLLECTION

■ A fully loaded update of the PS3 classic *WipEout HD Fury* that adds content from *WipEout 2048* and locks it all at 60fps – it offers 4K for Pro users and an incredible VR mode too. A stunning package that needs to be applied to the original titles, though the lack of an integrated custom music option grates.



F-ZERO GX

■ This now-legendary, Sega-developed GameCube classic is a must-play for any anti-gravity racing fan. *F-Zero GX* performs perfectly in terms of framerate and handling, with truly stunning visuals that still manage to look absolutely incredible today. A modern Switch port would be most welcome for existing fans and new players alike.

WIPEOUT 2097

■ Probably the most highly regarded racer in the *WipEout* series by fans. This follow-up to the original remains eye-catching visually and offers a pumping soundtrack. The track design and gameplay here remain top-notch despite its 32-bit origins. A seminal racer, and a must-have.

craft turning, pitching and flying. With all of these in mind, we essentially develop an idea of what we want in each craft and we iterate on it until we are sure we have got it right."

While speed is a key aspect in racing games of all types, we have to talk about something that no one really likes doing, braking. *Pacer* has adopted the airbrake systems seen in AG racing games with fully analogue control, as Carlton explains: "Each craft has two airbrakes that can be used to help turn the craft sharply if held down but each one is also analogue, so you if you press a trigger halfway, you will get half of that airbrake's capability. They can be useful on technical circuits, but having both airbrakes active act as the crafts main brake, so there is a lot of finesse in how they are used."

Pitch is also not forgotten unlike in say, *WipEout Fusion*, where the craft seemed almost rigidly stuck to the circuit without real need to dip or lift the nose. "A craft can pitch to get extra speed from a jump or fall, but if a player doesn't counter in time, the craft will hit the track and can be slowed from it. This can also be used to manage how the craft flies on an undulating track to take a faster or more manageable route," says Carlton. The system was a key feature of *WipEout 2097* when you would unceremoniously bounce if you hit the track floor at high speeds, mastering this became one of the most satisfying parts of AG racing games.

Combat is the remaining piece of the puzzle for Carlton to discuss with us. *F-Zero* does this without weapons but with ramming techniques, *WipEout,* of course, goes full *Mario Kart*, though fortunately without a Blue Shell equivalent. *Pacer* takes its own approach with a new take on the weapons system. "We have a feature in our weapons called 'impulse', which is something we believe helps set us apart," says Carlton. "When a craft is impacted by a weapon, instead of being automatically slowed, they are shoved sideways and away from the point of impact. This means that a skilled pilot may be able to predict this and prepare for it with a defensive weapon, or react to the impact and counter-steer to avoid a wall."

Defence is an important part of any battle and *Pacer* mixes things up in this department, too. "We have taken a new approach both in terms of health systems and craft interaction," says Carlton. "There are two ways of resisting damage; shield and health, which allow for an interesting element of risk management," he adds.

» [PC] Even the gods want a piece of the racing action.

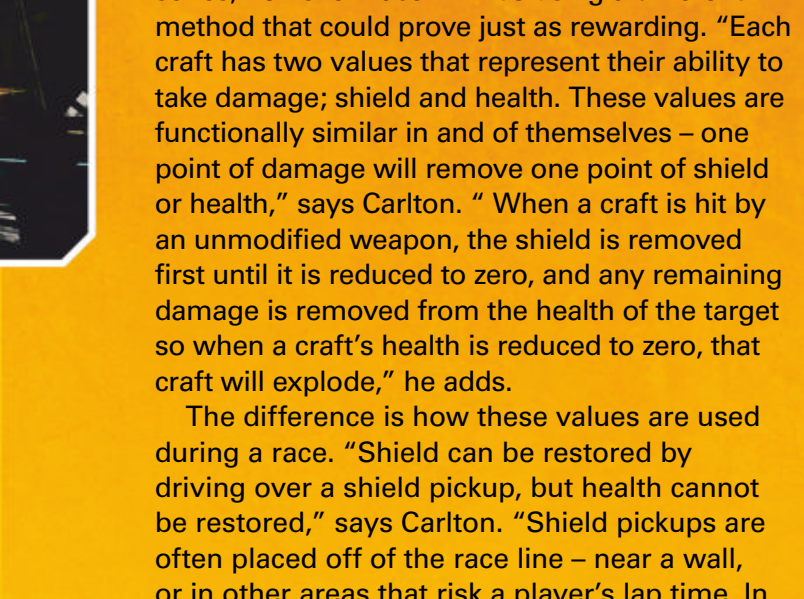
Photo © Rebecca Clarke

» Carlton Gaunt works at R8 Games as a game designer of *Pacer*.

The weapon absorb feature of *WipEout Pure* offered a superb risk and reward element in the series, however *Pacer* will be using a different method that could prove just as rewarding. "Each craft has two values that represent their ability to take damage; shield and health. These values are functionally similar in and of themselves – one point of damage will remove one point of shield or health," says Carlton. " When a craft is hit by an unmodified weapon, the shield is removed first until it is reduced to zero, and any remaining damage is removed from the health of the target so when a craft's health is reduced to zero, that craft will explode," he adds.

The difference is how these values are used during a race. "Shield can be restored by driving over a shield pickup, but health cannot be restored," says Carlton. "Shield pickups are often placed off of the race line – near a wall, or in other areas that risk a player's lap time. In order to collect one, a player will need to take a slightly longer route around the track. The choice between total race time versus craft stability is one the player is constantly making," he explains.

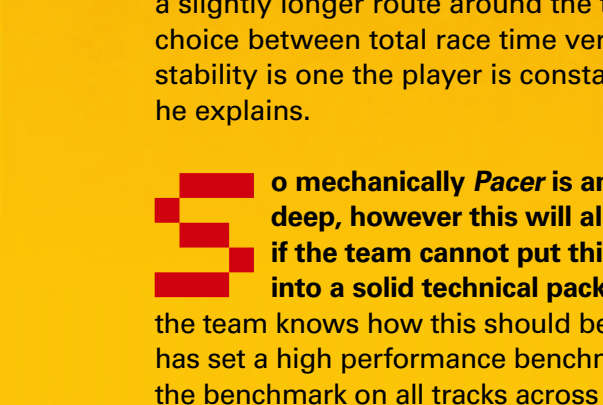
So mechanically *Pacer* is ambitious and deep, however this will all be for nought if the team cannot put this altogether into a solid technical package. Luckily, the team knows how this should be done and has set a high performance benchmark. "60fps is the benchmark on all tracks across PC, Xbox One and PS4!" Carlton asserts, rather emphatically. "4K visuals are also available on the PS4 Pro and Xbox One X versions, so we're aiming for the highest visual quality possible on current-generation hardware."



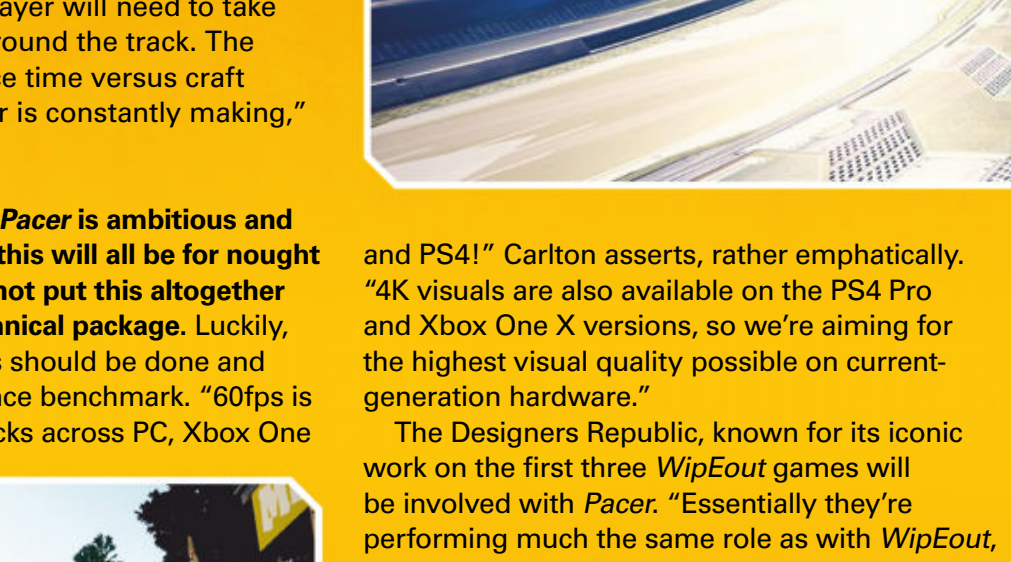
» [PC] The tracks wind through every type of biome you'd expect from a racing game.

The Designers Republic, known for its iconic work on the first three *WipEout* games will be involved with *Pacer*. "Essentially they're performing much the same role as with *WipEout*, designing much of the in-game iconography – the brands, the teams have all been in their hands, helping both give the game that futuristic feel it needs and a nice, subtle visual link to *Wipeout*," explains Carlton.

This rather nicely provides a nice segue into the music, Cold Storage also of *WipEout* fame will be involved. "We approached Tim (Cold Storage) about creating a similar musical feel in a modern game, which he was happy to contribute to. The work Cold Storage has produced so far has been of a brilliant quality and we are excited to show it off in the full release," says Carlton. 'We will also have a mix of named and community artist with some exclusive music too," he adds.



» [PC] Your rival is just behind you, don't let them pass!



» [PC] *WipEout* style imagery adorns the trackside advertisements.

» [PC] The sun glinting on the surface can be hazardous at 200mph.

» [PC] Sparks fly when you're attacked but can you regain control and win?

R8 games has also tackled modern customisation demands from gamers with Garage mode. Everything from individual weapons and craft loadouts can be customised to allow the player to tailor the experience to their own liking. Lots of content will be available from launch, too. "*Pacer* will have 14 tracks with bespoke environments, each with up to eight variants; night, reverse and mirrored, which can be mixed and matched to create lots of new ways to master a given circuit," he details. "There will also be five crafts – each with their own unique handling stats which can be further tuned in the garage – and 11 base weapons that again can be tweaked in the garage mode, more than seven unique game modes for players to enjoy in single and multiplayer."

Pacer is showing itself to be a potentially superb experience. It has evolved significantly from its original *Formula Fusion* roots and Carlton is confident in the studio's product. "We're aiming for the perfect distillation of grabbing the best parts of the anti-gravity games of old and combining it with the advances we've had with both software and hardware," he states. "*Pacer* is a retro-fuelled game, but one played out in the modern era, with all the power that provides."

Future Classic

Modern games you'll still be playing in years to come

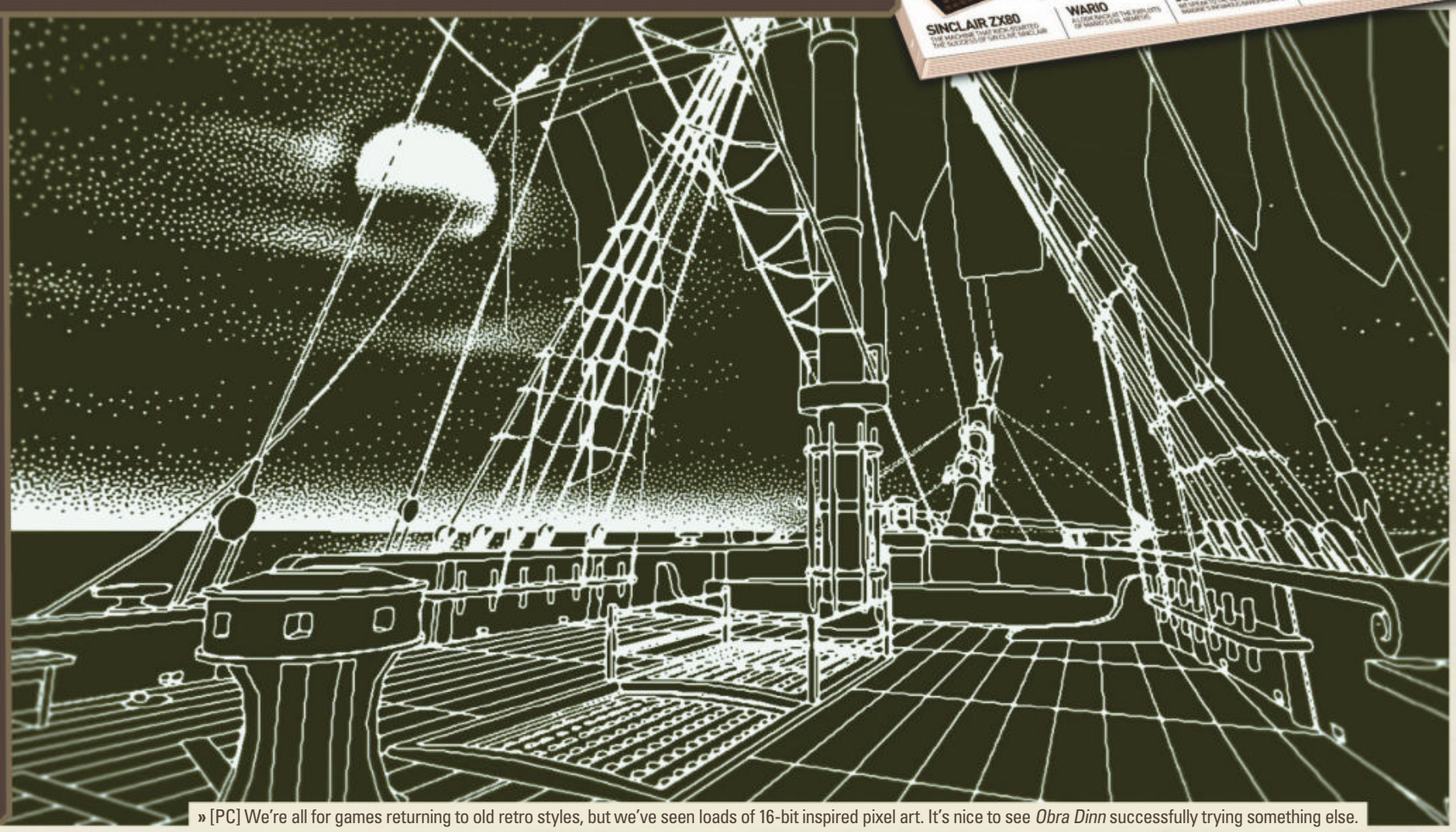
Info

» **Featured System:** PC
» **Year:** 2018
» **Developer:** 3909 LLC
» **Key People:** Lucas Pope

Go Deeper

» *Obra Dinn* started life as a free demo that Lucas Pope brought to the 2016 Game Developers Conference. After positive feedback, he decided to expand it into a full game.

» *Obra Dinn's* graphics were inspired by designer Lucas Pope's love of early 1-bit Macintosh titles. Early on, he found the style gave people motion sickness, so he had to develop a form of motion blur.



» [PC] We're all for games returning to old retro styles, but we've seen loads of 16-bit inspired pixel art. It's nice to see *Obra Dinn* successfully trying something else.

We take a voyage into one of the most effective detective games ever made to reveal what makes it so tantalising, and why it will be remembered for years to come

Words by Paul Walker-Emig

RETURN OF THE OBRA DINN

THE BACKGROUND

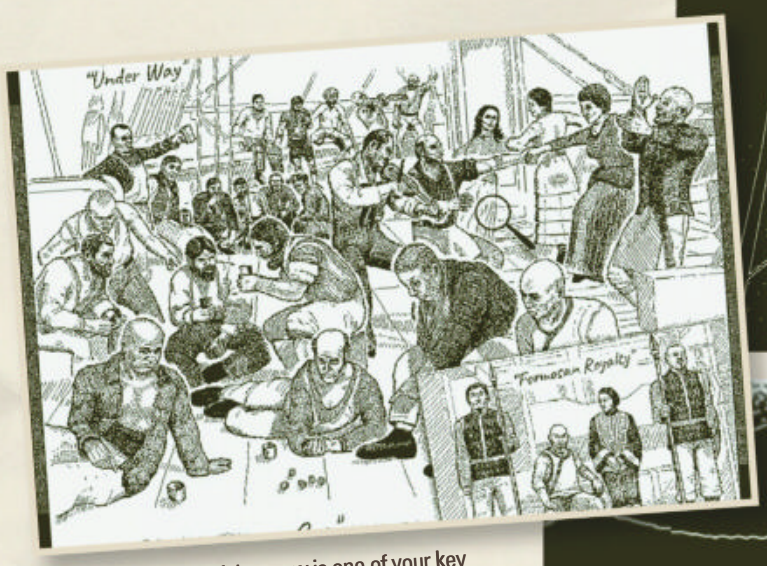
Developer Lucas Pope came to prominence on the back of critically acclaimed indie hit *Papers Please* – a game about playing as a border guard in a fictional Eastern Bloc country. The success of the former Naughty Dog developer's first indie title inevitably meant that, when images started circulating of the retro-looking monochromatic game that would be his follow-up, people were excited to find out more.

The initial spark for *Obra Dinn* came from an idea Lucas had where the player would die over and over; each time they'd be given a snapshot offering some context for their death, and then they'd be transported back in time and would have to try and reconstruct it based on the clues they'd been given. From this initial experiment, Pope took the idea of a freeze frame moment of death and started to think about how this could be used to tell a story. That game would become *Return Of The Obra Dinn*. The reputation Lucas had from *Papers Please* ensured that the game would have an audience on release, and the fact that it was bloody brilliant meant that its audience sang its praises far and wide, making it another word-of-mouth hit.

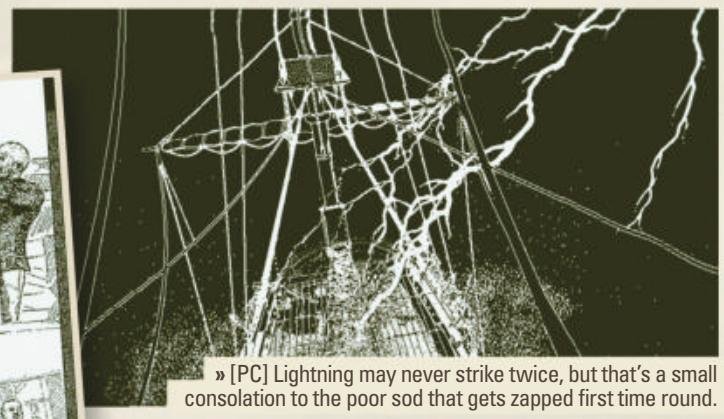
THE GAME

The game takes place in 1807 on a ghost ship from which the game takes its title: the Obra Dinn. The ship has recently showed up on the English Coast, absent of any of the crew that manned it when it first set sail (well, any *living* crew). You play as an insurance adjuster who is tasked with finding out what happened to each member of the crew, uncovering the tragic story of the ill-fated vessel in the process.

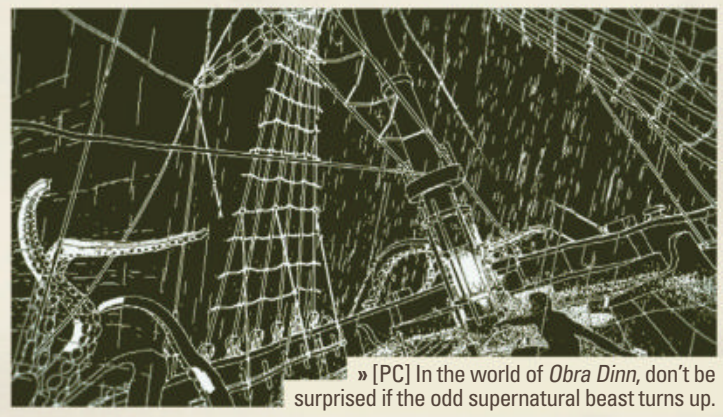
To do this, you have two tools at your disposal. The first is a supernatural watch that lets you revisit a snapshot of a deceased person's final moments to get an idea of how they died (and there are plenty of dead people on this ship, so your watch will get a lot



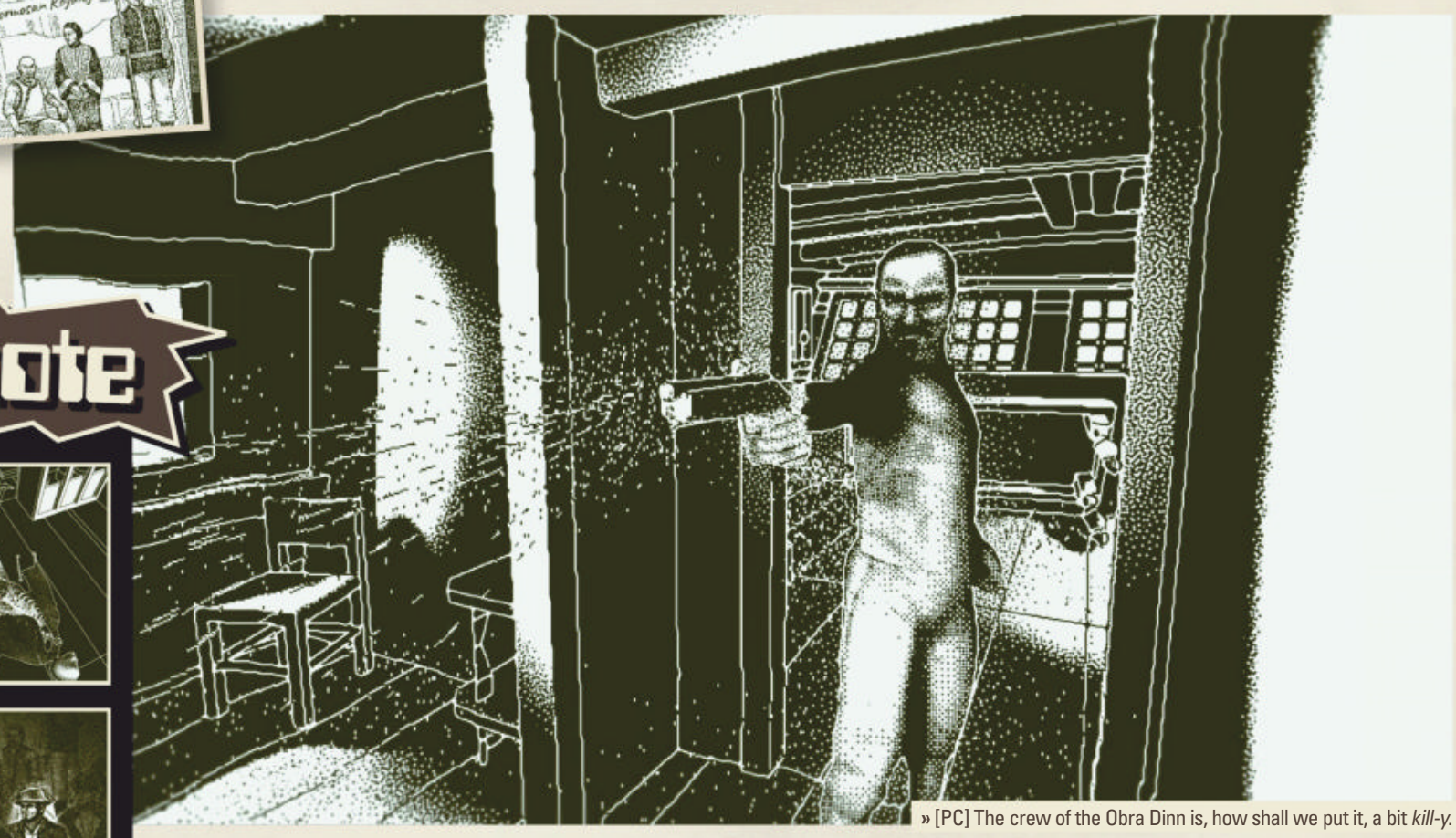
» [PC] This sketch of the crew is one of your key pieces of evidence. You'll start off with no clue who is who, but piece by piece you'll work it all out.



» [PC] Lightning may never strike twice, but that's a small consolation to the poor sod that gets zapped first time round.



» [PC] In the world of *Obra Dinn*, don't be surprised if the odd supernatural beast turns up.



» [PC] The crew of the Obra Dinn is, how shall we put it, a bit *kill-y*.

Things of note

MEMENTO MORTEM

This watch is a powerful piece of kit but, smartly, it has its limits. You only get to see a freeze frame of someone's last moments.

NAVIGATING THE NOTEBOOK

You can zoom in on a crew member's face to have them revealed in a sketch in your notebook to help better identify them.

CHAIN OF REVELATIONS

Investigating into one character's death can lead you to the remains of others within that memory, creating a Russian doll-like chain of morbid revelations.

MUSIC TO YOUR EARS

Return Of The Obra Dinn is great with deft audio cues, such as the musical flourish that accompanies every use of your magic time-distorting pocket watch.

OCCUPATIONAL HAZARDS

We'd rather stay on dry land if the long list of gruesome deaths that befell the Obra Dinn's crew is what to expect at sea.

of use). The second is a notebook that contains some key pieces of evidence, such as a ship's manifest and a sketch of the crew. Using this evidence and the clues you get from revisiting an individual's last moments, you have to work out three things: who that person was, how they died, and who killed them, if their death wasn't an accident. Smartly, the game requires you to solve deaths in threes before it'll tell you if the solutions you've entered into the notebook are correct to prevent you brute-forcing them.

Using these two tools, *Obra Dinn* sees you take a journey across space and time: exploring the physical space of the ship and the events that took place during a disaster-ridden voyage as you jump back through time to piece together a macabre tale told through the personal tragedies of each crew member's demise. What starts off as a list of names will gradually become people as you learn about the relationships between crew members, the hardships they endured and the choices that they made. However, while this narrative element is an appealing part of the game, that's not the core of what makes it such a success.

The key to *Obra Dinn* is the sense of pleasure you'll gain from ticking off each mystery with the power of deductive reasoning. You'll start off simple, hearing a Scottish accent in a death scene and then scanning the ships manifest to check the nationality of its crew members to identify a key individual, for example. As you continue, you'll be forced to find new strategies, the game constantly keeping your brain working and prodding you in new directions, whilst always maintaining a focus on logic that's key to making it work as a detective title. You'll struggle at times, the wealth of information you've got to deal with often feeling overwhelming. But, without fail, every time progress slows, you'll eventually have that light bulb moment that picks up the pace, mysteries falling like dominoes before you as that notebook comes ever closer to completion.

WHY IT'S A FUTURE CLASSIC

So many games promise to let us play the role of detective, but few deliver – we get action games with detective elements, narrative games where sleuthing takes a back seat to storytelling, open world games where detective work is just one more waypoint on a map littered with tasks to complete. *Obra Dinn*, on the other hand, is laser-focused on the appeal of the mystery genre and the mechanics of detective work. It is a game designed to swamp your mind with theories, thoughts and speculations, that prompts you to play mental games with clues and intuitions and that, in the notebook, offers a way for you to bring order to that chaos, untangling the mental mess into coherence. This process of taking clues and conjecture and turning them into truth is not only intensely rewarding, it is what the mystery genre is all about. In recognising that, Lucas Pope has created what is, arguably, a definitive detective experience.

FRANÇOIS LIONET

We say bonjour to another French programmer, this time François Lionet who became part of development group Jawx. He is best known for the STOS and AMOS, programming languages that helped others make games

Words by Andrew Fisher

"Bravo for all your research!" says François, who we discovered was originally studying to be a vet. That changed after his games were first published, but did affect his military service. "I pushed it back as much as I could. With a degree you are more comfortable as you go in as an officer, the classes were a month and then I arrived at the barracks in my Renault 4L [a small hatchback] loaded with Commodore Amigas, monitors and printers. I had the possibility to live off-barracks, I programmed in the mornings and evenings and that's it. I didn't learn anything, but the last posting that no one wanted – in eastern France, and [it was] cold – was my hometown.

What are your earliest computer memories?
The Texas Instruments TI-57 [calculator] that I had, 49 steps of program, with 'GOTO' and seven registers, one label that used two steps of program, so it was very limited and I was very jealous of the guys that had the HP 41. And I made a version of [code-breaking board game] *Mastermind* with three numbers.

What was the first home computer you saw?
The Ohio Scientific Superboard II. It was absolutely unknown in France, I just saw an ad. It was a board with everything on and was cheap at the time – 2500 Francs in 1981. You had the keyboard, the video output, 4K of memory, 6502 processor, and tape recording output. I was the only one in France to use it, but it was a good computer.

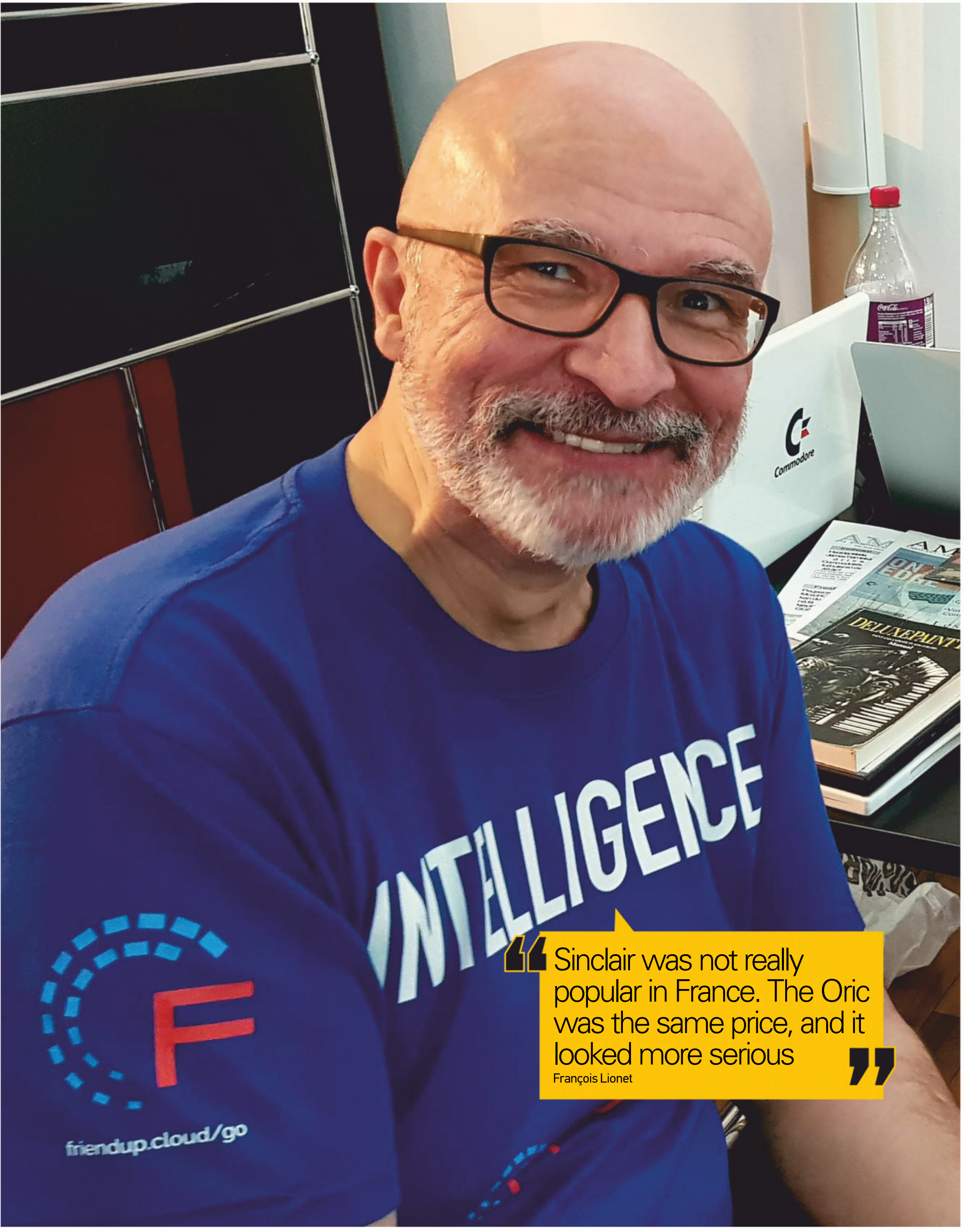
When did you start programming?
With the Superboard, I started making games in BASIC – and after the first I saw you couldn't do anything serious in BASIC. So I programmed my own assembler in BASIC and used that.

What inspired your earliest games?
The classics: *Breakout*, *Pac-Man*, *Defender* I loved at the time – scrolling the whole screen, but it was only in characters. With sound as well – you had two bits output on the board, you could plug a speaker on it directly so you had sound. I even managed on two bits to make a three-voice sound generator. [Laughs].

How did you start work on the Oric?
Sinclair was not really popular in France. The Oric was the same price, and it looked a lot more serious. I don't know how it is inside but the ZX, the keyboard… it was the soft keyboard, the Oric was much better. And to be honest I was not going to buy anything from Sinclair anymore. When the ZX80 came out, I made the journey from Lyon to Paris just to see it – I went to the company that was distributing it, and I saw this white piece of crap that when you press on the keys, the displays flashes and oh no! So Sinclair was out for me forever. The Oric was a good machine.

» [Oric] Control this white whale in François' unusual simulator *Bering* (named after the Bering Strait).

How did you start writing games professionally?
My first commercial game *Driver* was in the summer [of 1981]. It was just a copy of an arcade game [*Rally-X*] I saw at the fair in my home town. So I started to look for publishers. This game in a couple of months sold 2,000 copies, and I made like 20,000 Francs. I did choose, in the end, a good publisher. But I received one letter from Loriciel, which is a big French company that was massive on the Oric at the time, 'Thank you for your game proposal, we offer in return three games from our catalogue.' I am



> Sinclair was not really popular in France. The Oric was the same price, and it looked more serious
>
> François Lionet

sorry I have lost this letter, because it should be on display to show how crooked the publisher can be. Exploiting young geeks!

So with *Driver*, *Bombyx* and *Bering* behind you, how did you join Jawx?
The publisher I found was DIALOG Informatique, driven by Jean Luc Pronier who was a fantastic guy. We worked well together and he became part of Jawx, the famous French development 'group' (with no legal structure and that was a problem later) – I had never heard of them. Then I met the group itself – Jacques Fleurance and Frédéric Pinlet, who were commercial people just out of the business world, who didn't know very much about games but had some nice ideas. I was looking for this kind of group so I was happy to join.

Jawx had some very unusual ideas…
Very French, you can say. Somehow I was ashamed of some of the games. *Serenade*, for example, was unplayable – it was fun, I don't know, they came with the ideas. They were working with Jim Cuomo at the time, who was doing music. It was kind of a team, but there were so many problems with the way the team was designed and I had a big fight – a legal fight that lasted for 15 years, to prove that I was the author because they were claiming to be the author as well. […] Another thing that really makes me laugh, they were very close to officials and agencies, they were commercial in Paris and sold themselves to the politicians. So we were part of the author protection society that is called… [pauses dramatically] SCAM! [Laughs]. I mean, come on, how can you be so French to call it that!

> When Moses was eaten by crocodiles, you had to read one page of the Bible. You lose, so read the Bible
> François Lionet

How did *Cock'In* (also called *Chickin Chase*) come about?
It's their idea, they wanted to do something French and a bit naughty. The original title *Cock'In*… in French it's the same as the English phrase, 'Fuck it!' It was a really good idea. You had to spend some time inside the little house and then it started to get more difficult. It was quite a balanced game, with a nice progression curve, and you can play for a long time, so… did you play it?

» [C64] Saying 'HOWDY' to an alien, thanks to *Captain Blood*'s UPCOM translator icons.

Yes, we played the Commodore 64 version a lot.
Ah right, with the big sprites… doubled, with the big pixels. This is a game that is horrible for sprite engines. At one moment you can have everyone in one spot, so that is bad for coding.

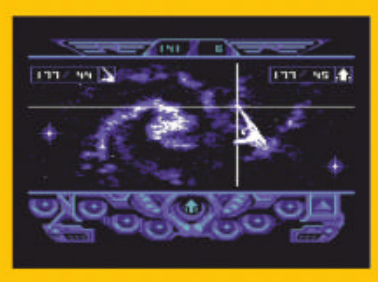
So there's *Olé* or *Raging Beast* – why a bullfighting game?
Why not? The bull didn't die. And if you play to the point where you can do some rodeo, it was too complex – you have to rotate the joystick, that's my fault. But it could be fun.

We've read your old blog that's online, where you mention *Abner's Bible Tales* and spending time in the USA after the CES show in 1986. Could you tell us a little bit about the story behind that?
That's a wonderful story, and it was a fantastic period of my life. So we were working with Jim Cuomo and he's an Italian, 100 per cent Italian. And his mother is 500 per cent Italian. Very Catholic, she lived in Colorado Springs. A wonderful place, just at the limit of the Rocky Mountains. And Jim offered to host me at his mother's, to program a game on the Commodore 64, because his mother – who was kind of an old lady, but dynamic – wanted to do a game based on the Bible. So I went there, I had my room, I worked in the garage so it was awfully hot. By random I met a cousin of mine over there, but I've lost track of him. He had a wonderful place, exactly at the utmost sacred place of the Native Americans – stolen by the Americans, of course. So one morning we went there and climbed up the boulders with no ropes, 50 metres above nothing, and we sat looking east, no clouds, and we saw the most sacred place of all America together watching the sun rise. I'm sure there's now a McDonalds or something there. And I discovered Jim Cuomo was in a band, so he was playing in the sleazy suburbs of America that were frightening.

The concept of the game, you had three stages. The first stage was baby Moses on the Nile, so you had to drive the basket along the Nile and not get eaten by crocodiles. And when Moses was eaten by

FIVE TO PLAY Magic from the coding genius

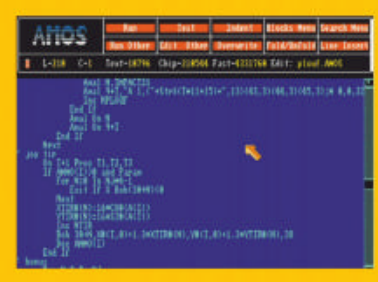
BOMBYX
■ Impressively, François made this Oric title in just one week, using BASIC, and it's great fun. The premise is the familiar *Snake* aim of collecting bonuses and watching your tail grow. At higher difficulties there are moving enemies to contend with, and the constantly ticking timer imbues a bit more tension to the gameplay.



CAPTAIN BLOOD
■ An entire galaxy to explore packed into 64K, allowing you to seek out alien civilisations, beam ETs aboard your organic ship and explode whole planets at the touch of your on-screen finger. The clever UPCOM communication system adds so much atmosphere, and the fractal flying sequence still looks great.

CHICKIN CHASE aka COCK'IN
■ The chunky expanded sprites give the C64 version a distinctive look. Visit the henhouse to 'service' the hen, then protect the eggs she lays from the marauding vermin (rats, hedgehogs and snakes). Peck the corn and juicy worms for extra energy… you will need it after all that mating.

OLÉ aka RAGING BEAST
■ This hilarious and bloodless take on bullfighting was unique at the time and remains fun today… when you master the controls. Wave the cape at the passing bull successfully and the crowd throws a rosette to be placed on the bull's horns. Get trampled and the stretcher carries you off.



AMOS
■ After the success of STOS, François transferred his utility to the rival 16-bit Amiga. It helped launch the careers of many programmers and was used for commercial games, demos and more. With the planned backward compatibility in AMOS 2, start searching your old disk boxes for unfinished AMOS projects.

» The whole STOS range, although François did not program the 3D version of STOS (or AMOS 3D).

» A Dutch magazine article promoting AMOS, with François pictured, in 1988.

» [Amstrad CPC] Run out of eggs in *Chickin Chase* and your chicken gets battered…

crocodiles, you had to read one page of the Bible. You lose, so read the Bible – that was not the right way to do it! I think I still have the box…

We have been trying to find the game online and it doesn't seem like it's been archived.
I think I have lost the floppy or the cassette… all written in machine language.

The other two levels, according to the blog, featured David defeating Goliath with his sling and the trumpets trying to bring down the walls of Jericho. Both these levels featured rotational controls, perhaps inspired by the rotations François had used in *Raging Beast*. *Abner's Bible Tales* has so far proved elusive, so if anyone knows more or has a copy, get in touch by dropping us a line: retrogamer@futurenet.com.

So your next major project was converting *Captain Blood* to various formats, how did you get involved?
It was in 1987, I just finished my vet studies and I moved to Paris with friends from vet school who wanted to specialise in tropical medicine. We rented a small house near the vet school in Paris, and I was programming during the day while they studied. I did *Captain Blood*, *Jeu Du Roy* and STOS there.

It was a fantastic experience, on many sides. First of all I met my future partner Yves, who was in charge of the Amstrad CPC version which was absolutely brilliant. I did the Commodore 64 and PC versions. And I met the authors, Didier Bouchon and Philippe Ulrich: giants in the French gaming industry, and still are.

Didier is a genius artist. Maybe you have noticed flying over the planet with the mountains, in fractals, is not as good in the adaptations as on the Atari? Why? We spent like a day all in machine language on this effect, and Didier could not explain how he did it at all! The mountains [on the ST] had some kind of rotations that we never managed to do. Working with this kind of genius was fantastic.

What inspired you to create STOS?
The idea was from Jawx. The plan was to replace GEM – you know, it was so-so. On Amiga the Workbench is okay. On the ST if you want 16 colours you can only use half of the screen, and so on, personally I hated it. It started as a replacement for GEM with a kind of DOS that was programmed by a Greek friend of Jacques and Frederic, Constantin Sotiropoulos. He was in charge of the DOS, and at the time when you had the DOS you programmed a kind of BASIC language to go with it. That attracted me, and as I made games I wanted to display graphics, make sounds, collisions. And as I had been working on many machines, the first thing when you start a project is you make a sprite engine, a sound engine, a movement engine and a collision engine so why not build them once and for all?

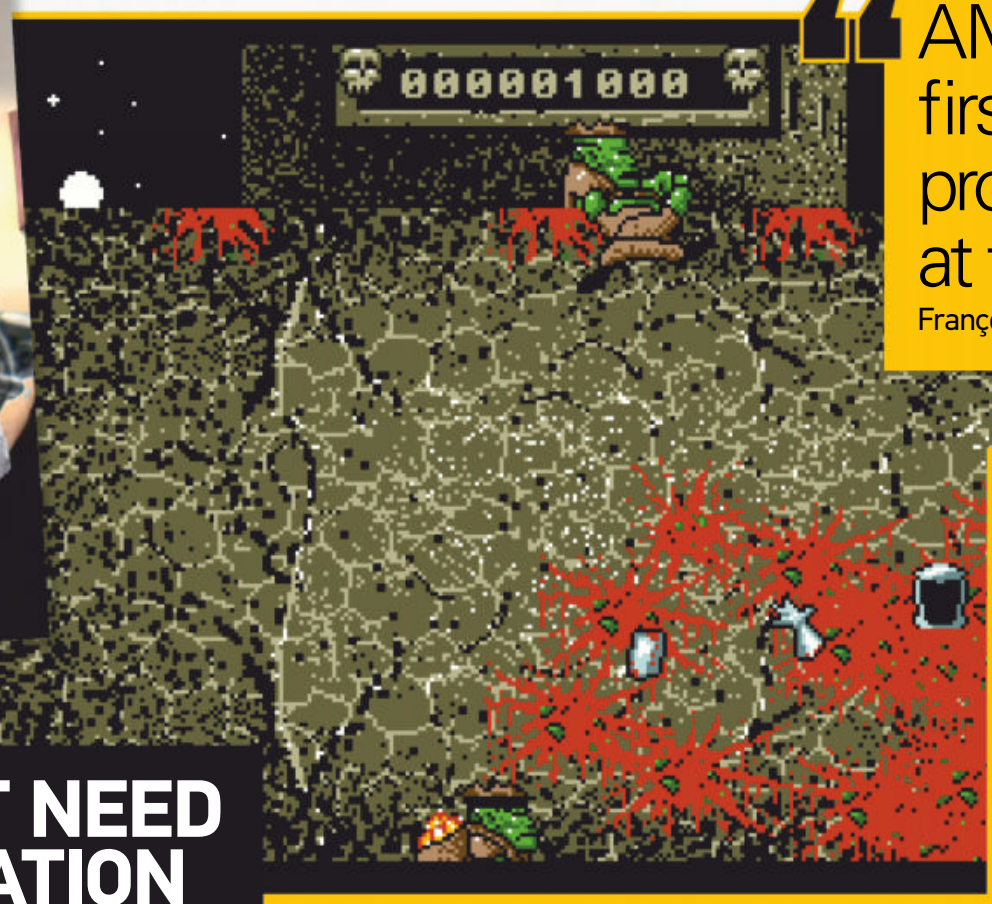
So that's how it came about. Have you played many games that were created with STOS?
Not really. I'm not a gamer. At that age, in the Eighties and Nineties, when I was interviewed I would say, 'Oh, I know this game and that,' – stop lying. I know nothing about good games. I code the game engine and that's all.

Was it difficult to follow up STOS with AMOS for the Amiga?
No, it was like getting out of a tiny room and entering a castle! I was immediately poking the hardware… and I did not respect the display, which is the major criticism that has been made of AMOS, that it doesn't respect the system well. For games, you do not respect the system, you go as far as possible. On most computers you have the screen and it writes the display from the top to the bottom. In AMOS you've got layers,

SELECTED TIMELINE

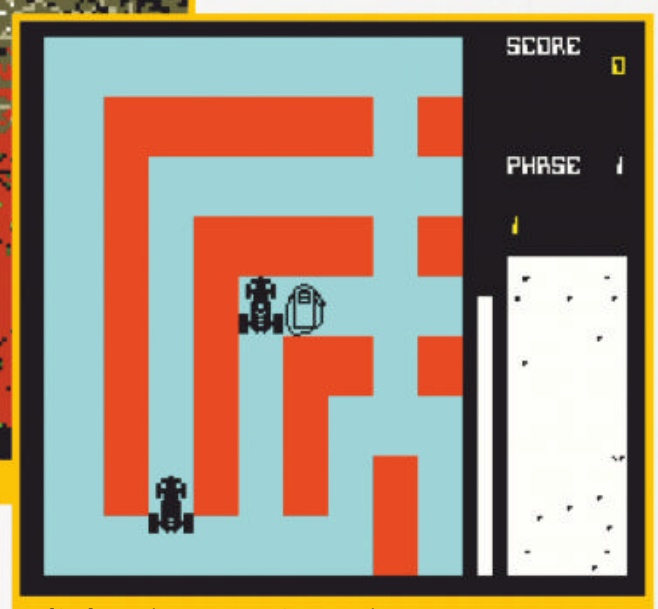
GAMES
- **DRIVER** [1981] ORIC-1
- **BOMBYX** [1981] ORIC-1
- **BERING** [1982] ORIC ATMOS
- **KATUVU** [1984] C64
- **COCK'IN aka CHICKIN CHASE** [1985] VARIOUS
- **RAGING BEAST – OLE!** [1986] VARIOUS
- **ABNER'S BIBLE TALES** [1986] C64
- **LE JEU DU ROY** [1987] THOMSON MO5/TO7
- **CAPTAIN BLOOD** [1987] VARIOUS
- **STOS ORIGINAL VERSION** [1987] ATARI ST
- **STOS BASIC** [1988] ATARI ST
- **STOS COMPILER** [1989] ATARI ST
- **AMOS BASIC** [1990] AMIGA
- **AMOS COMPILER** [1991] AMIGA
- **EASY AMOS** [1992] AMIGA
- **AMOS PROFESSIONAL** [1992] AMIGA
- **KLIK & PLAY** [1993] PC
- **COREL CLICK & CREATE** [1995] PC
- **THE GAMES FACTORY 1.0** [1996] PC
- **MULTIMEDIA FUSION 1.0** [1997] VARIOUS
- **IMSI MULTIMEDIA FUSION** [1998] VARIOUS
- **JAMAGIC** [2000] VARIOUS
- **MULTIMEDIA FUSION 1.5** [2002] VARIOUS
- **MULTIMEDIA FUSION 2.0** [2006] VARIOUS
- **THE GAMES FACTORY 2.0** [2006] VARIOUS
- **CLICKTEAM FUSION 2.5** [2013] VARIOUS
- **AMOS2** [TBC 2019] VARIOUS

» "I am Lionet of the Borg. You will be AMOSimulated!"



» [Amiga] Ian West programmed *Ork Attack – The Return* and its prequel with AMOS.

> AMOS was one of the first game-oriented programming engines, at the time
> François Lionet



» [Oric] *Driver* (no, not the PlayStation one) is an excellent attempt at making a *Rally-X* style game on the humble Oric.

WE DON'T NEED NO EDUCATION

François on the Thomson computers used in French schools

In UK schools, BBC computers taught computer literacy. France had informatique pour tous and Thomson computers. François was not impressed. "I made a chess game, *Le Jeu Du Roy*, with the floppy drive for development. I'm not lying: it was nearly one chance out of two when you save and leave the disk in the drive, the disk corrupted. I had a pile of five disks and saved five copies. Imagine kids coming back next week saying, 'I want to go on with my program,' and it's crashed!

"The only good thing was the lightpen, and no one used it. Processor speed was awful. The graphic chip was the same as the Minitel terminal. The BBC is so much better," François concludes. "This is very French, the hardware choice was political. Such bad decisions had an impact on industry, even today – except the videogame industry which is very passionate, where we can be good – France is computer illiterate. Can you imagine, [Jacques] Chirac didn't think we will be using computers everywhere! In a TV report he called the mouse a 'mulot' [field mouse] instead of a 'souris' [mouse]. It was so hilarious the expression stayed in the language for jokes."

and that's a lot more difficult. There's one routine that does the timing and I have never touched it again. Never. It was tough. But it works.

Did you know Mandarin Software, which published STOS and AMOS, made some Fun School educational games with the utilities?
Of course! The last version of Mini Office was made with AMOS Professional. And it was hell for me, because calling the product Pro was the worst mistake we ever made, it should have been called AMOS 2 because it had nothing professional.

What led you to forming Clickteam?
With the lawsuit in 1993 that was still going on with Jawx, I couldn't make a PC version of AMOS – because it would have been the same product, and Jawx claimed authorship. I wanted to move to PC, of course. AMOS was one of the first game-oriented programming engines, at the time, and I started thinking about accountants using Excel. They make complex Excel sheets, even with loops – endless loops, where you refer one cell to another – and when you ask them, 'Are you a programmer?' they go 'No!' But they are. So I took the idea of these formulas, and the way you display them, that makes the complexity. And then I added the conditions and actions, Klik & Play was the very first application with such things as conditions and actions. Everyone is doing it now, like Scratch. One of the key things of Klik & Play and the whole Clickteam range of products even today is that it doesn't lie, it doesn't hide the mechanics. Even if it's a simple and visual tool, it can make a complex program. That's wonderful.

Clickteam's products have been in the 'game maker' genre, is that your speciality?
It seems to be! For me, it's easier to make a tool than a game. You can have a badly designed tool that is still usable, but when a game is badly designed you can't enjoy it properly. When a tool has good potential, you accept that the interface is crap, the icon is here instead of there, and you accept that it crashes because you need it. For a game, you don't accept it. Making a good tool – and good, in the way that they are usable – is a bit more difficult.

What have been some of the best games made with Clickteam software?
Five Nights At Freddy's – the whole series, except one, was made with Clickteam Fusion. I interviewed the author, he's a fantastic guy. What is strange is that he is a very deep guy, really nice but not extremist, American Catholic, and he makes horror games! The first time I played it, it was at my cousin's, he shut the light off with me in front of the computer and I was playing it. [Screams]. That was very scary. There are videos on YouTube of many games made with Fusion (search #MadeWithFusion); you will be amazed – incredible graphics, incredible designs. And *Baba Is You*, you must have heard of this one – a fantastic concept, an amazing game, this was made with Multimedia Fusion.

Now you are working on AMOS 2 – what made you want to return to it now?
Since like five or six years, I began to receive emails with the revival of retro computing, saying, 'Thank you very much for AMOS, I learned programming with it and I owe you my career in IT.' I must have received hundreds of them, and then I discovered an AMOS Pro group on Facebook, and a STOS group. From there a little idea grew – get the old AMOS code and convert it. That's how the project started, in November 2018 when I opened the Patreon. It shows there is an interest and if you go to the AMOS Pro group, it used to be dead and people would occasionally post

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MANDARIN SOFTWARE

» [Amiga] *Jetstrike* was created with the help of AMOS.

» [C64] Riding the Raging Beast, whose aggression level is variable, ranging from 0 to 255.

pictures of an old game. But now five or six people started to program again in the original AMOS, knowing that the promise it will work on everything once it is compiled with the new version. So somehow the ball starts rolling, and I'm so happy about it.

So that was important to you, the backwards compatibility for AMOS 2?
It is vital. I have to live on this, it has to be a success. I was just a kid when I wrote AMOS. Not only will it be compatible with the old version, it will have a new syntax I am designing with a professor from Turin University and IT expert Tom Cully, done by an adult instead of a kid. So there is real logic in the instruction set, and the ability to program 'flat' or 'object-oriented'. I keep programming, with these promises, but not the awful design of the original AMOS.

The goal of AMOS Software – the startup I created this summer – is the education of coding for young people. Next year, after the release of the boxed version of AMOS 2 in December, I'll move to Malta. Because Malta is a little England under the sun. It's a laboratory of 500,000 people, and we have contacted local schools to give courses of computing with AMOS 2 over three years. The first year, using games and role-playing and practical things; you put a ball in a drawer, you open the drawer, you have the number, this kind of thing. And with new projects and games, working with a programmer to make them discover the good way to learn. And their game graphics will be redone by a professional artist, based on the ideas of the kids, so they are proud to show their games. Second year is object-oriented programming, and third year I will teach them how artificial intelligence works. And the kids will then understand it, you can make an AI with sand falling – that's how simple it is. The goal will be that they program their own AI, and I'm sure that they will be successful. Not only will I learn a lot of things from the kids, but at 11 years they will be able to say to their fathers, they understand how artificial intelligence works and they can *program* it, these kids will have some kind of ultra-advantage in life.

What are your thoughts on other game-making software that's out there?
Programming all the time, I don't have the time to use these. I had a look at the ones made by people I worked with at Europress. I am still friends with them, even if DarkBASIC was kind of a copy of AMOS in a way; it was done in a nice way, so it's okay. Recently I made my first project in Unity, it's a tree structure.

We tend to find that developers feel a pull back to the platforms they used to work with. Would you go back to the old machines and program something new?
Certainly, but only when I have time. Getting an old machine, you have to fix it, this takes time – and time is the most precious resource. When I am finished with the AMOS 2 compiler – the JavaScript version – I will have it output C++ code so it works at maximum speed on the native machines, and I would like to make a C64 version.

Wow!
Programming the 6502 is marvellous, and the SID can do so many things. I remember the sound of the springs as you typed – and you tried to program with your hands up at an angle.

Merci bien, it's been fascinating.
Merci beaucoup!

YOU ASK THE QUESTIONS

François sorts through our mailbox to answer your queries

DRS: The Oric does not have a great reputation in the UK – Tasket's Andy Walker compared it to a doorstop – so how would you defend it?

Why does it have a poor reputation there? It was even made by an English company! The construction of the machine – Sinclair machines were cheap and they looked cheap – the Oric beat that, especially the Atmos; it was a well-made machine. And the display processor in the Oric, the same as in the Thomson machines three years later, you define the colours and then the line has the colours. So it was rather difficult to program when you had sprites, you end up with a blank area on the left of it, that's annoying. It was cheap and well-made, so it's unfair.

ANTIRIAD2097: Will we see an update of *Cock'In* as an AMOS 2 demo?

It's funny you say that, as I tried to make one in JavaScript, and yes I am going to do it! And you will be able to open the door and see inside the henhouse… you will see what's happening inside. [Laughs].

ERIC: Were there any hurdles moving from STOS to AMOS? And what are your thoughts on Blitz?

No, because it was the same processor I could copy and paste much of the code. But it was like going from a [Citroen] 2CV to a Ferrari! To tell you, all my life I have been Asperger's, you are like a kid inside, so by working by myself I am okay with it and I'm a kind of Rain Man – but a slow one. I had [a] kid's reactions at the time so I was not happy. I was pissed because Blitz is a fantastic product, it's what the AMOS instruction set should've been, instead of being programmed from day to day with no clear plan. I am sorry that they did not manage to revive it. I am sure AMOS will be a success but we need to get there before they do.

Dave Mirra Freestyle BMX

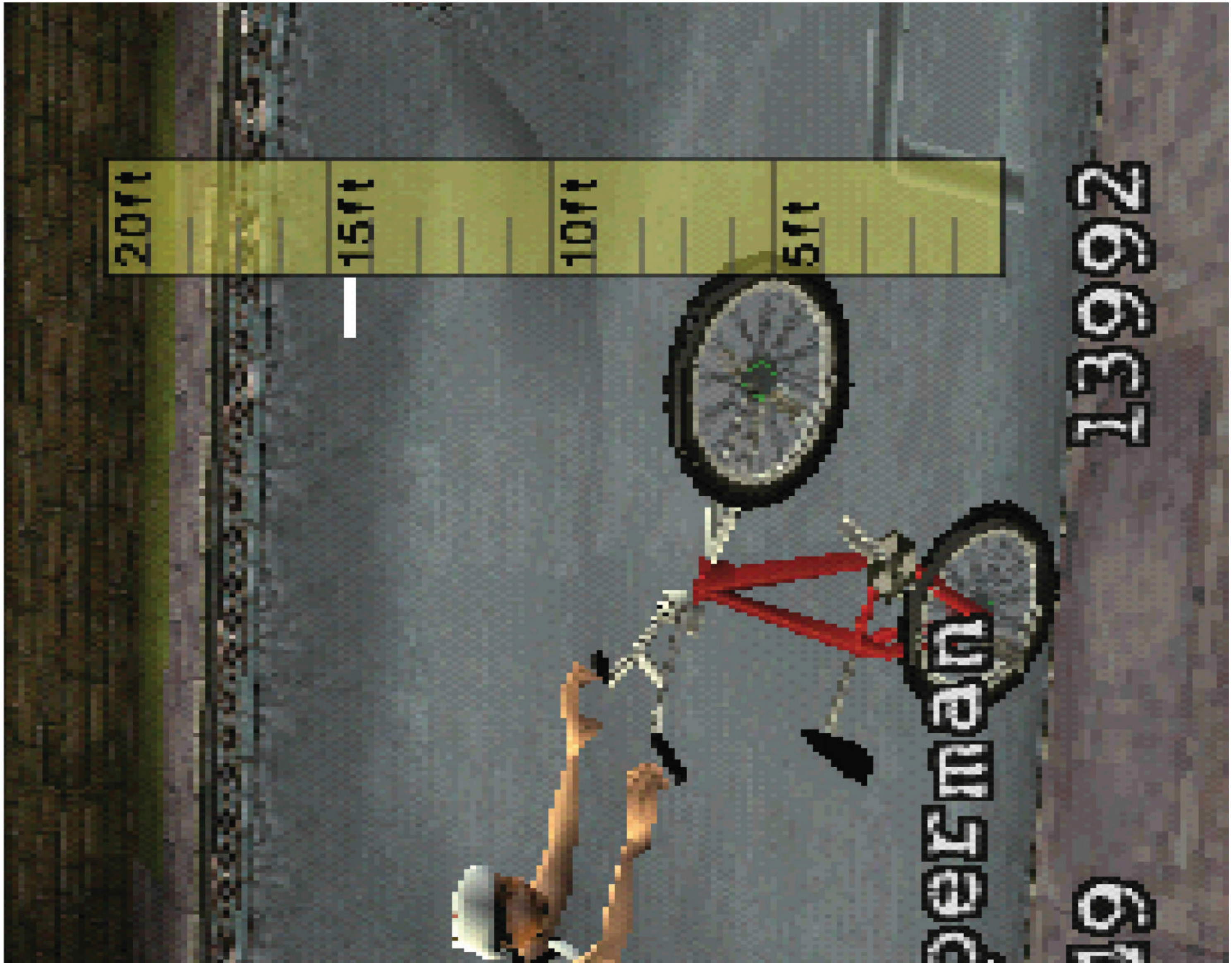
LOUD AND PROUD

» PLAYSTATION » 2000 » Z-AXIS

While the vast majority of my writing is published in Retro Gamer, I've been known to contribute to other magazines around these parts, from the likes of *Play* (RIP) and *games™* (RIP) to *Linux User & Developer* (RIP) – and as I write this, I've recently submitted my first piece for *Metal Hammer*. My dad raised me on Motörhead and I've been reading the magazine for over a decade, so it's quite exciting. And like so many things in my life, gaming helped develop my love of heavy music.

Back when I was a young teenager, I didn't really have many ways to discover music. What little money I got for working was spent on games and *Pokémon* cards, and we didn't have a PC so I couldn't get in on the nascent MP3 revolution. We didn't have cable TV either, so I couldn't watch music channels. Thankfully, I grew up in an era of licensed soundtracks, and they helped to expand my tastes when I had few other options – and one of the games that really stood out to me on that front was *Dave Mirra Freestyle BMX*.

As a game, *Dave Mirra Freestyle BMX* was fine. It's pretty easy to see that publisher Acclaim's entire design process was to get Z-Axis, give them a copy of *Tony Hawk's Skateboarding* and say, "Something like this, please." Despite being fairly derivative, the ragdoll crash animations were pretty funny and it was a competent game that was easy to have fun with, so I put more time into it than I care to think about. But the biggest reason I stuck with it for so long was for its soundtrack, which features an assortment of artists that Darran would describe as "too loud" – Rancid, Dropkick Murphys and Deftones among them. For me, the best track of the lot is *Don't Drag Me Down*, one of Social Distortion's heaviest songs and one whose anti-racist message hasn't aged a bit. I haven't played the game in a long time, but I do think fondly of it whenever I hear that song.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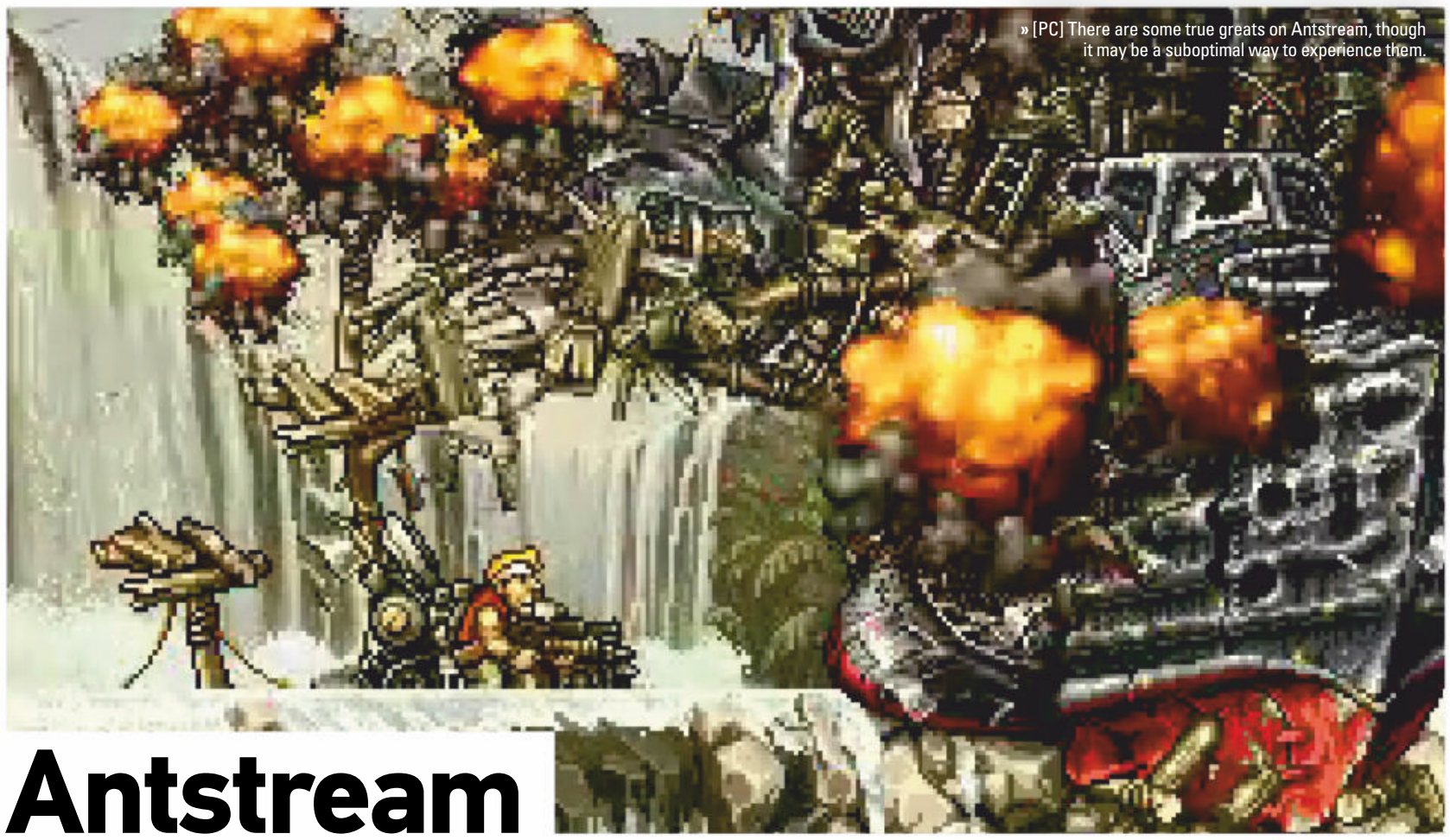
NOSEMAN

>> This month we find out if Antstream is worth the subscription price and also learn if co-op is a good fit for the new Wolfenstein franchise. Additionally, we take Horizon Chase Turbo for a spin and play the Xbox One remaster of Metal Wolf Chaos



» [PC] There are some true greats on Antstream, though it may be a suboptimal way to experience them.

Antstream

ANT AND DRECK

INFORMATION

- **FORMAT REVIEWED:** PC, ANDROID, XBOX ONE
- **ALSO ON:** MAC
- **RELEASED:** OUT NOW
- **PRICE:** £9.99 PER MONTH / £95.88 PER YEAR
- **PUBLISHER:** ANTSTREAM
- **DEVELOPER:** ANTSTREAM
- **PLAYERS:** 1-2

Antstream has been one of retro gaming's most interesting projects for a while now, as it's attempting to position itself as the Netflix of retro games – streaming and all. Having now spent some significant hands-on time with the service, some of our fears over that concept have been dispelled, but not nearly enough of them to truly recommend the service at this point in time.

Antstream is easy to set up, though we found that the website's claim that it is "available on all your devices" was a little misleading, as some popular ones aren't yet supported – at the time of writing, iPhone, iPad, PS4 and Switch apps were yet to launch. However, it was easy to get started and log in on the devices we tested.

»[Android] The touch controls aren't great, due to the way d-pad input is handled.

Upon signing into the service, an easy-to-navigate home screen lists a little over 200 games, split across a variety of genres – this screen helpfully highlights useful information, too, such as which games have challenges. At the time of writing, just over three quarters of Antstream's active library originated on home computer formats, with plenty of C64 and Spectrum games, rounded off by a smattering of Amiga. The bulk of the remaining titles are arcade games, with a very small selection of Mega Drive games providing the only console representation.

In some respects, Antstream deserves to be commended for its technical achievements. We ran the Android app on a low-end Amazon Fire tablet from 2015 and experienced solid technical performance and control response. With the streaming nature of the service, that means that you'll get equally good performance whether you're playing Spectrum favourites or arcade hits. Input lag also proved to be way less of a problem than we were expecting. This is our chief concern with any game streaming service, and we don't think most players will notice it.

However, being playable is a low hurdle to clear, and sadly it's just about the only one that has been cleared. Video quality is the most noticeably subpar aspect of the product. We frequently experienced a variety of faults including momentary tearing and smeary images, as well as more

» Antstream is a subscription-based retro gaming service which enables players to play hundreds of games (just under 600, at the time of writing) across a variety of devices. The games are emulated on a remote server, with video and audio streamed to your device over the internet. The project has been in development for a number of years and went into early access earlier in 2019, following a Kickstarter that raised £70,301 from 861 backers. The service opened to the general public on 1 July 2019, and the company has recently attracted funding from Chinese games giant Tencent.

»[Xbox One] Antstream is planned for all consoles, but right now only the Xbox One version is available.

✱ PICKS OF THE MONTH

DARRAN

Horizon Chase Turbo
I loved playing *Lotus Esprit* and *Top Gear*, so this spiritual successor has been eating up lots of my spare time.

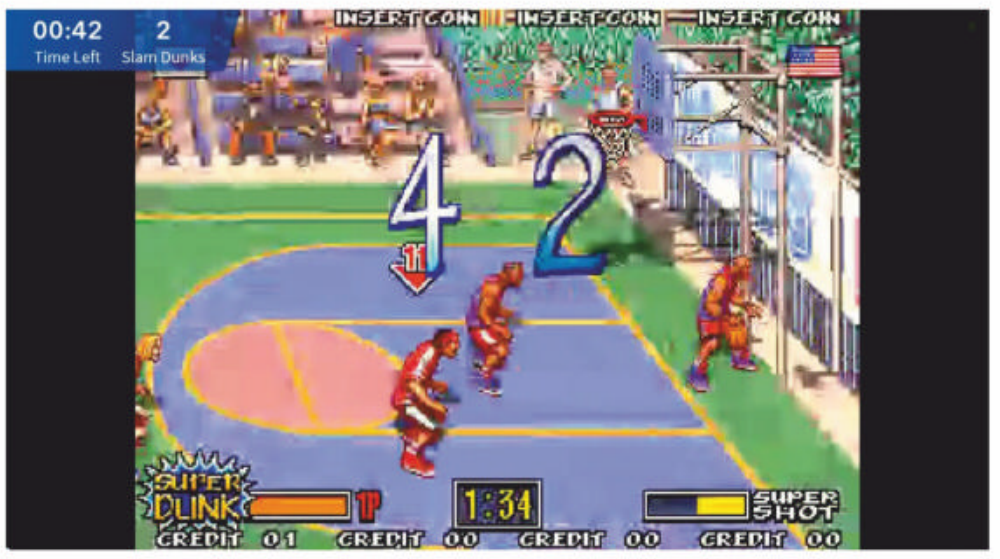
DREW

Horizon Chase Turbo
This came up as a bonus for PS Plus recently, and I've had good fun with it. I used to love *Lotus* on the Mega Drive.

» [PC] The only console games you can find are from the Mega Drive, like this *Speedball 2* port.

»[PC] *Pinball Dreams* is awesome, but we never would have found it if we hadn't been told it was there.

»[PC] By the time we finished *Magical Drop III*, the stream was heavily glitching – look at those cats!

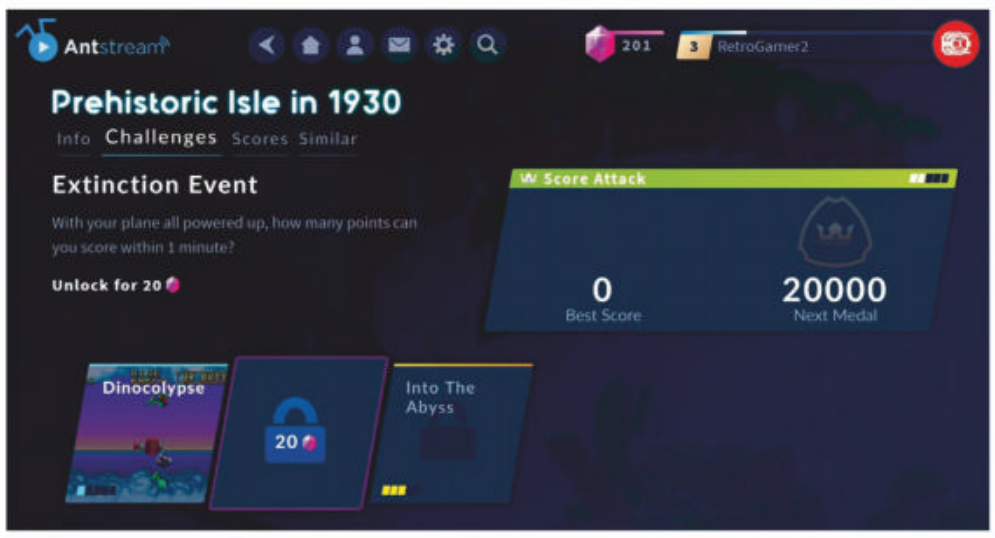


»[PC] When compression struggles to keep up with the action, video quality tanks pretty badly.

persistent blocks of incorrect colour and garbled details, and these seemed to increase in severity the longer a session lasted. Because the frames have to be delivered to the player as quickly as possible, Antstream can't opt for slow video encoding to increase quality – but bitrate is also a concern for those playing on mobile connections, so that can't be too high, either. We clocked the Windows program consuming 1-2Mb/s of bandwidth, and on that basis we reckon it'd chew through over 650MB of data over an hour. It's certainly not an efficient way to deliver games which are a tenth of that size (and very frequently considerably smaller).

Other major areas of the Antstream experience are lacklustre, too. Controls are predetermined for each game, and can't be remapped – so if you don't like the default layout, you're stuffed. The touchscreen controls are particularly irritating as the virtual d-pad recentres every time you lift your thumb off the screen, so you're required to slide your thumb about in a way that feels rather unnatural. There are no video options to speak of, so if you want scanlines, forget that. Worst of all, the service doesn't offer any options to save or suspend your game at all, which isn't really acceptable.

Discoverability is also atrocious. Each game has its year of publication, original system and publisher listed, but you can't browse games by these criteria. The search function is little help in this regard – a simple text search is available, but it only returns titles so putting 'Mega Drive' into the search box won't return games for that format. We were provided with a list of games by an Antstream staff member, which is helpful as Antstream's website doesn't promote its full game listing – when we did eventually find it, it wasn't up to date anyway. Of course, that doesn't help the average user, who will be left to search random words and hope they hit something fun.



»[PC] The challenges are pretty cool, but it's odd that you have to pay crystals to unlock them.

It's a shame, because there are some genuinely nice things that Antstream does. When games have challenges, they allow you to quickly jump into a game and try to achieve certain goals – there are leaderboards and achievement medals available, and you can challenge friends with Antstream memberships to beat your scores (though you have to earn and spend crystals to do this, bizarrely). These are usually well constructed and offer a great way to sample games quickly – we'd love to see more of these in retro releases.

Antstream offers access to plenty of games at a pretty low price, but the service as it stands is a substandard way to play them, to the point that we'd prefer to seek them out elsewhere – especially since many of the arcade games are provided by companies that are making their back catalogues widely available, such as SNK and Data East. Being an ongoing service, Antstream won't stay static and the company is saying that it intends to fix many of its issues. But right now, Antstream doesn't feel like a product that is ready for prime time – it feels like it's still in open beta. ✱

In a nutshell

While our fears about Antstream's video streaming were only partially realised, the service has plenty of issues that are wholly unrelated to that technological choice. We would advise readers to wait and see if the problems are resolved before taking the plunge.

PICK OF THE MONTH

Horizon Chase Turbo

» **System:** Switch(tested), Xbox One, PS4, PC » **Buy it from:** Online, retail » **Buy it for:** £17.99 (digital) £34.99 (retail)

Shockingly, we never got around to reviewing this old-school racer when it was first released digitally, so a recent physical offering has given us a good chance to rectify that. Interestingly, despite the many comparisons that have been made to Sega's *Out Run*, *Horizon Chase Turbo* has little in common with it and is directly influenced by the *Top Gear* series, a 16-bit console franchise that had its roots in the earlier *Lotus Esprit* series. Now that the history lesson is out of the way, let's explain why you need to add this slick racer to your collection.

For starters *Horizon Chase Turbo* is stuffed full of solid content, which makes sense as it's an evolution of 2015's *Horizon Chase: World Tour*. In addition to the 105 tracks that make up the World Tour, there's a Tournament mode, Endurance options and Playground, which consists of limited-time races with all sorts of neat challenges. Additionally you can play local multiplayer, too, meaning value for money is very good.

Technically *Horizon Chase* is solid, with recognisable locations from around the world, neat weather effects and 19 other cars to take on. While it typically hits a solid 60fps, there is an odd stuttering that occasionally happens on later levels. It rarely impacts play, but the drops are noticeable. The soundtrack is by Barry Leitch, the same composer of *Top Gear* and *Lotus Turbo Challenge 2* and is very good. His inclusion means you have some brilliant remixes of his earlier work and they sound superb.

Of course, all of this polish and content would be for nothing if the racing itself was poor, and thankfully that's not the case at all. The way you collide with cars and the aggressive AI of your rivals is a little off-putting (just like *Top Gear*) while the handling is also highly reminiscent of the earlier 16-bit series. There are a few annoying difficulty spikes, but it can't stop *Horizon Chase* from being lots of fun.

>> Score **80%**

»[Switch] Try and keep clear of cars when overtaking as collisions rarely go in your favour.

»[Switch] The framerate is largely smooth, occasionally dropping when a lot is going on on-screen.

Wolfenstein: Youngblood

» **System:** Switch (tested) Xbox One, PS4, PC
» **Buy it from:** Online, retail » **Buy it for:** £34.99

We've been big fans of the new *Wolfenstein* games, so it's a shame that *Youngblood* is such a weak follow-up. The ability to play with a friend or on your own with an AI helper helps to differentiate it from the earlier games, but you gain no real benefit from doing so. The story is weak, with the two female leads sounding like they're 11-year-old boys, bosses soak up bullets like sponges, the Eighties setting is rarely more than window dressing, while needing certain types of bullets to take down different types of enemies sounds cool as a concept, but is annoying in its execution. Even the level design of Arkane Studios can't save this.

>> Score **60%**

Metal Wolf Chaos XD

» **System:** Xbox One (tested) PS4
» **Buy it from:** Online » **Buy it for:** £20.99

If you've never experienced From Software's cult Xbox mech shooter, be aware that it's all style and little substance. Stages typically require you to track down items, blow them up and then take on an immense, heavily armoured boss. Between stages you can research and buy new weapons to strap onto your giant mech. Despite its simplicity, *Metal Wolf Chaos* remains plenty of fun because its tongue is planted firmly in its cheek and its so entertaining to play. It's a shame, then, that it's been treated to a lacklustre remaster due to a range of missing graphical effects, muffled sound and missing music files. From Software's game deserves better.

>> Score **71%**

Arcade Archives: XMultiply

» **System:** Switch » **Buy it from:** Digital
» **Buy it for:** £6.29

Considering how much the Saturn and PlayStation versions sell for, Hamster's conversion works out as exceptional value for money. Style-wise *XMultiply* is very similar to *R-Type* (another Irem game) but it stands apart thanks to its novel power-up system, which revolves around you using your tentacle arms to shield yourself from incoming projectiles. As with other games in the *Arcade Archives* series, this is an excellent port, thanks to a variety of tweakable options, a separate High Score version of the game, and a five-minute Caravan mode, which both offer plenty of additional replay value in addition to the core version of the game.

>> Score **78%**

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Gamers HOMEBREW

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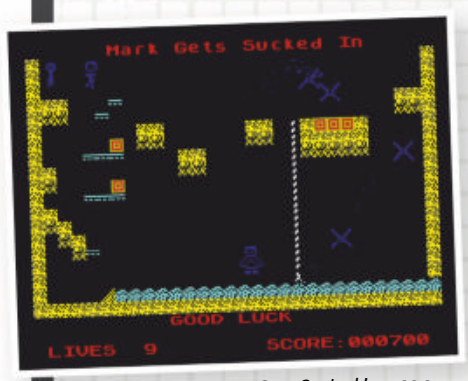
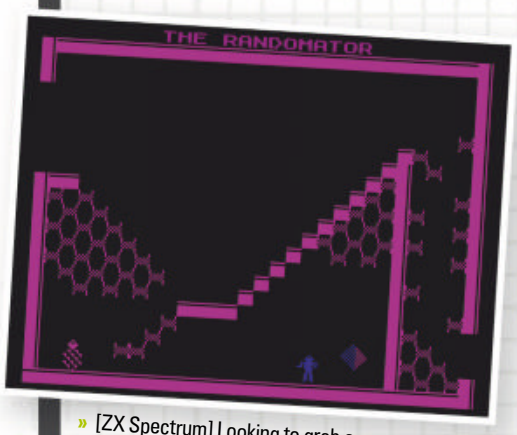
» [ZX Spectrum] **Rudolph the reindeer** had a very sparkly trail while saving Christmas.

Gaming NEWS



» [ZX Spectrum] *Mark Gets Sucked In* sees a gamer become trapped inside a videogame.



» [ZX Spectrum] Looking to grab a few extra points in *The Randomator*.

STARTING THEM YOUNG

The UK national curriculum was updated half a decade ago to include computer programming, so teacher Douglas McGregor at Bearsden Primary School decided that, rather than look at the topic in a general fashion, he would instead bring programming concepts together for his Year Six pupils through, of course, the medium of videogames. The platform of choice was the ZX Spectrum, using Jonathan Cauldwell's Arcade Game Designer to create a cluster of completed projects that cover a diverse range of topics and experiment with game mechanics in the process.

Some of the titles are fantasy-driven, including *The Quest To Become King*, *Trick Or Troll* and the intriguingly titled *The Dragon With The Wagon* all leaning towards the traditional *Dungeons & Dragons*-style theme in some form, but *Tiki Temple* also falls into that camp since it's set in the ominous-sounding *Dungeon Of Doom* with tasks including a rescue mission, defeating the guards and escaping with lots of loot along the way.

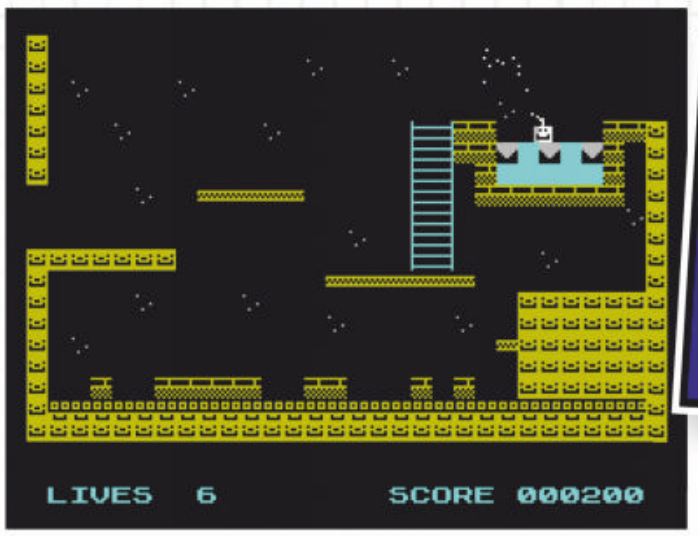
A couple of the games revolve around astronauts, with *Zoe's Adventure* seeing the player guide the hero through the late stages of her training, while veteran space traveller Timothy wants help to locate the Moonstone in *Timothy's Travels*. The science fiction themes continue with *Bot Floater* where a hovering robot needs to collect cash on the way to confronting its evil nemesis, while a robot uprising is the reason why the player controls The Last Human in the game of the same name. The furthest journey afield is probably *Lost In Space*, although *Astrid's Adventure* has a second title of *Mission On Mars*.

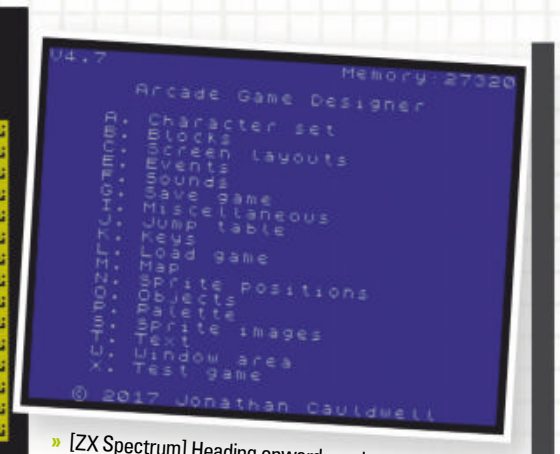
There's some surreal experiences from the likes of *Bob The Blob* where the player is a weird oscillating square, car-based exploration with *Rocky's Roads And Divots* or *Cherry Challenge* where a piece of sentient fruit needs to be guided through the harrowing rooms of the Evil Mushroom's lair. Closer to home – but still reasonably bizarre – is *Mark Gets Sucked In* which sees a gamer unceremoniously dragged into a videogame world which he must battle through to escape, and there's even some Christmas-themed action with *Rudolph Rescues Xmas* as the red-nosed reindeer tries to thwart the dastardly plans of Scrooge.

It's fascinating to see how the students either worked with or around the limitations of both Arcade Game Designer and the ZX Spectrum's graphical capabilities and all of the released games can be downloaded from Itch.io behind Kikstart.me.uk/bearsden-p6-spec.

NEW GAMES NEEDED

If you have a homebrew project you would like to see featured then please contact us at: **retrogamer@futurenet.com**





» [ZX Spectrum] Heading onwards and upwards with *The Quest To Become King*.

HOMEBREW HEROES

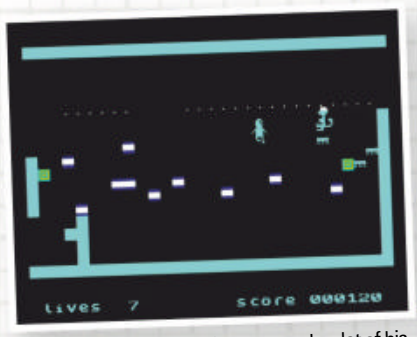
Douglas McGregor is a primary school teacher who made programming lessons more fun for pupils by introducing them to Arcade Game Designer and seeing where their creativity went from there

Where did the idea of using Arcade Game Designer in the classroom come from?
I have been developing the teaching of programming for several years. Although there are many excellent tools out there to help build coding skills, there is no major end product to bring all of these skills together and apply them in order to create something new and imaginative.

Through my own interest in the ZX Spectrum homebrew scene, I had played several games coded with AGD, therefore I set about creating a game myself – which is where *ScOtb0t* came from. I shared each stage with my class and asked for their advice while talking them through the code that I was using and how it all worked.

And is this something you would recommend for other educators to try?
I couldn't recommend it highly enough. It engaged every one of my pupils and really captured their imaginations. It enhanced their computational thinking skills substantially. Pupils had to constantly analyse and evaluate their code and level design. The artistic pupils loved the art and animation side while those with a passion for logical thinking appreciated the coding and debugging problem-solving process.

It is a wonderful free resource which can be worked on at school and at home.



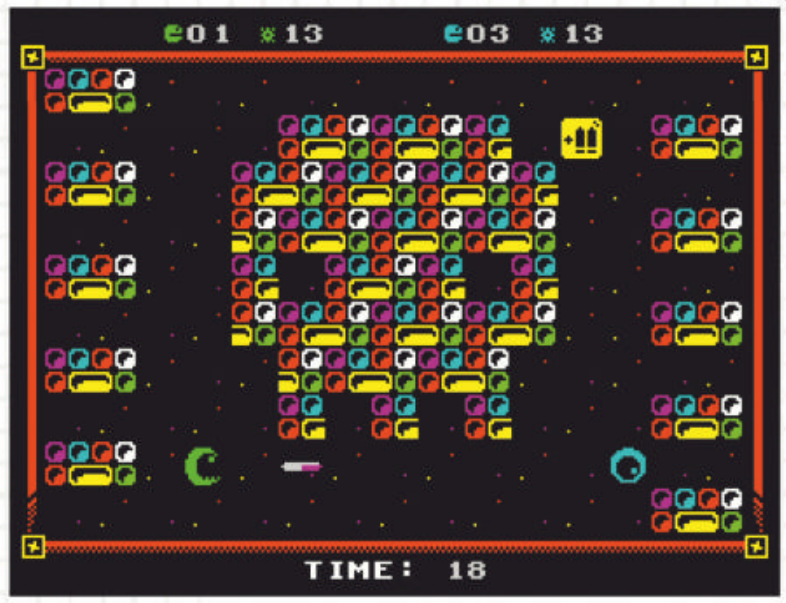
» [ZX Spectrum] Joey Jumpy spends a lot of his time bouncing around.

And how did the children take to designing games on older microcomputers?
The pupils were incredibly excited about it. We played some old ZX Spectrum games for inspiration which showed them they were making something tangible and real. It wasn't a case of copying some code to make something happen. Instead they learned a skill and then applied that to create something which was completely their own. This ownership and pride in what they were making was where the engagement came from which in turn made them far more likely to remember the code and appreciate exactly how and why it worked.

This depth of understanding gave them the confidence to edit their code as required and to create new code to enhance their games. As their games took form, their programming skills grew with them.

What can be learnt from developing on machines like the ZX Spectrum today?
Modern technology has come a long way in the last 37 years but the basic concepts of coding and how a computer understands commands remains the same. Every skill learnt is transferable to modern programming languages. More than that, though, it shows pupils that all you need is a good idea and some hard work and you can create your own game. Several of my pupils are already experimenting with different game development tools having been inspired by our project.

Finally, are there any more compilations of pupil-developed games on the way?
I hope to continue to use Arcade Game Designer with my new class next year, but I have also written a guide for others to follow and I am due to deliver a presentation for other teachers in the new term to share my experiences and hopefully inspire them to start coding on the ZX Spectrum with their own classes.



» [ZX Spectrum] This doesn't look like it'll end well for the cyan glaze.

ONE ON ONE

***Glazx* for the ZX Spectrum is a two-player action game where the objective is simple: both players are given control of a 'glaze' as they're dumped into an arena and must search for and destroy their opponent.** Useful items will materialise, which help in this task if they can be collected safely.

Work on this one is still ongoing, but what's already there is playable, with a dozen maps to choose from – another four are present but hidden – and multiple play modes. Downloads to the work-in-progress and extra information are available behind Kikstart.me.uk/glazx-spec.

» [ZX Spectrum] Making Santa Claus happy by gathering all of the misplaced toys.

AN EARLY CHRISTMAS?

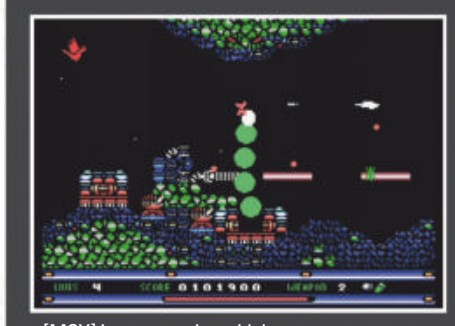
More Spectrum action, this time with a yuletide theme in *Percy Penguin In The Present Palaver*. After poor Santa loses some of the presents from his sleigh due to terrible Christmas Eve weather, the helpful flightless bird volunteers to waddle over and retrieve everything.

Percy has an hour to complete this task and there are plenty of environmental and patrolling hazards getting in the way to make that time limit even tighter, but fortunately he possesses exceptional jumping skills which will be handy. This present can be gathered from under the tree at Kikstart.me.uk/percy-present-spec.

DO YOU REMEMBER?

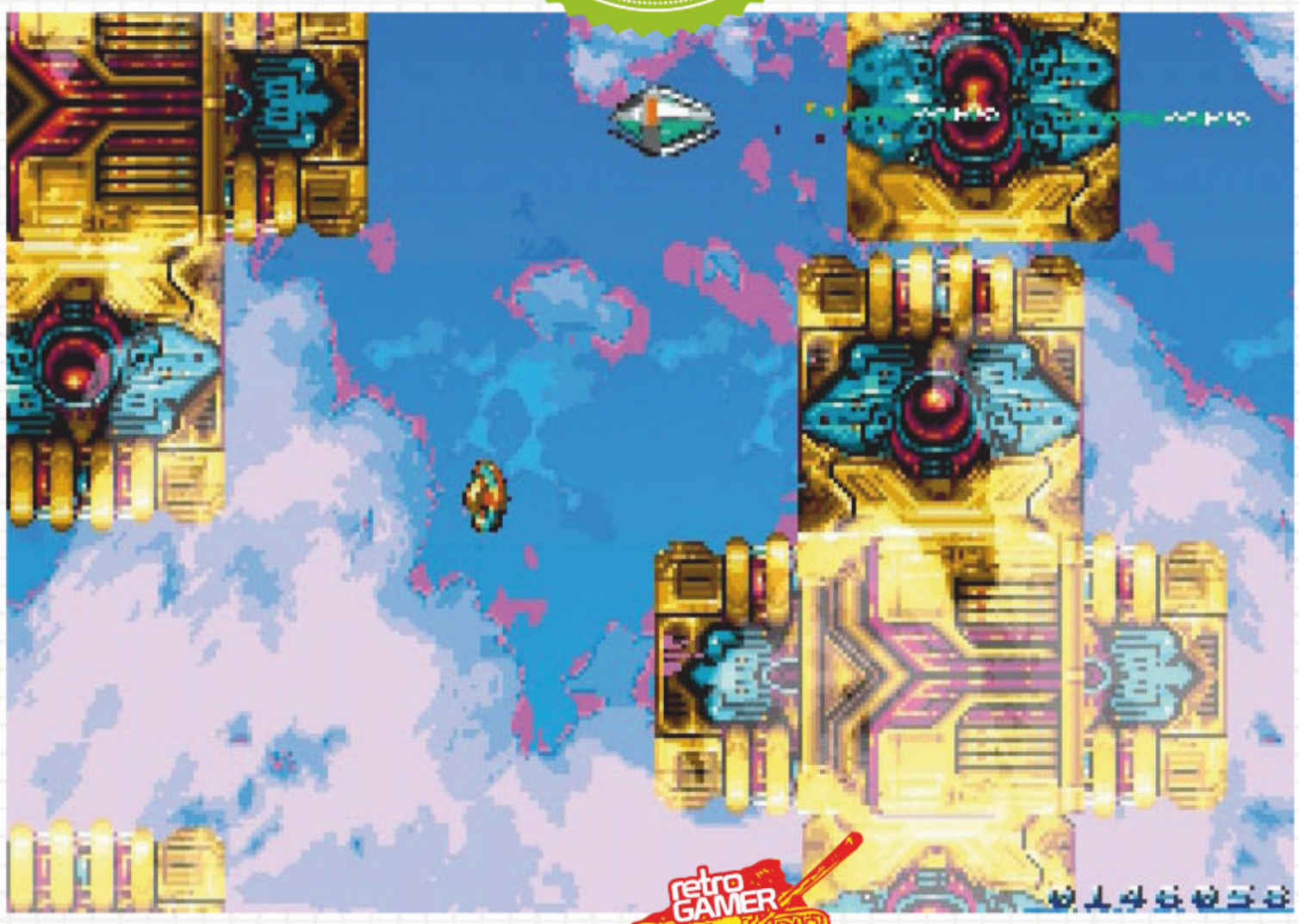
When Jim Benson's prototype transdimensional craft goes incredibly wrong during a test flight he finds himself lost in space and, if that wasn't bad enough, the malfunctioning drive has dumped our hero in deep trouble, surrounded by hostiles and armed only with a peashooter. The ship has better weapons – selected via the second fire button – but they require power collected from pods left behind after certain enemies are blasted and actually firing them eats some of that precious stored energy.

Originally released in 2005 for the MSXdev competition and upgraded for the final release a few years later, *Universe: Unknown* is a tough as nails horizontally scrolling shooter for the MSX that takes several cues from Konami's *Gradius* series while adding its own ideas to the mix. Head over to Kikstart.me.uk/uni-unknown-msx.



» [MSX] Large enemies with laser cannons: just what the doctor ordered.

» [MSX] Some landscape features need to be blasted to clear a path.



» [Amiga] Asteroids can either be avoided if the ship is powered down or blasted.

RESHOOT R

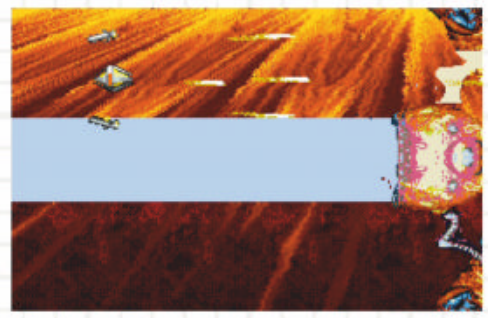
» **PLATFORM:** AMIGA » **DEVELOPER:** RICHARD LÖWENSTEIN » **DOWNLOAD:** KIKSTART.ME.UK/RESHOOT-R-AMIGA » **PRICE:** FROM €29.95, DOWNLOAD

Long-distance space travel has always been fraught with all kinds of perils and it's not always possible to allow for every eventuality while planning a journey. Natural interstellar events, like star storms, drift around the expanses of space, pulling in unwary travellers and, after a serious buffeting, can deposit them almost anywhere. That's the situation Aryn found herself in just before losing consciousness, waking up to realise her R1 spacecraft was far off course and drifting lazily through the infamous Tars nebula.

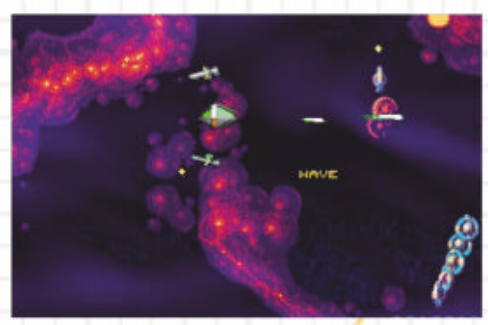
The Tars fleet really doesn't take well to strangers – or indeed to anybody who isn't a local, for that matter – so it doesn't take long before Aryn finds herself surrounded by extremely unfriendly, bullet-spewing attack ships. The R1 isn't completely helpless, however, and our heroine soon stumbles upon some helpful power-ups which improve things further, making the ship move faster and beefing up its weaponry with more bullets and a couple of support units which fire at diagonals to spread the electric death across the screen.

Upgrading the craft's systems in this way is absolutely vital to long-term survival, not just to help with obliterating enemies but also because the power-ups act as a shield for the R1, increasing the number of hits it can take before destruction. Learning the attack patterns and working out the best strategy for either dealing with or in some cases avoiding them is also important, especially the devious enemies which appear at the left of the playfield and, because the ship can't fire in their direction, must be avoided until they move into range.

Reshoot R has impressive visuals, a pounding soundtrack and is technically adept, but more importantly it's a very solid shoot-'em-up. Each stage is quite long but varied and heavily populated with extremely trigger happy nasties to either blast or avoid. The unusual twist on the power-up system where they also serve as a shield works remarkably well, giving the player a chance to recover from collisions if they manage to limp the stricken ship on to the next icon.

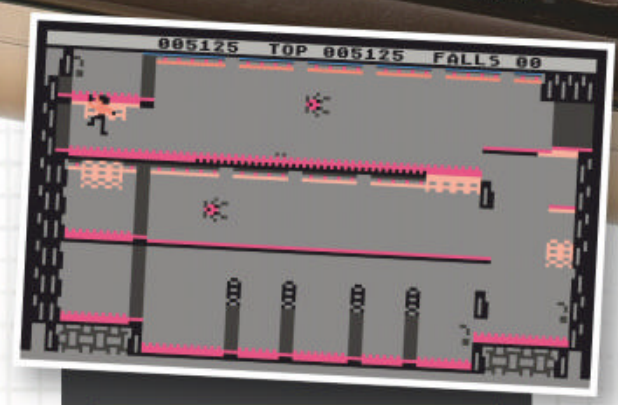


» [Amiga] This boss has a devastating beam, but it takes a while to charge.



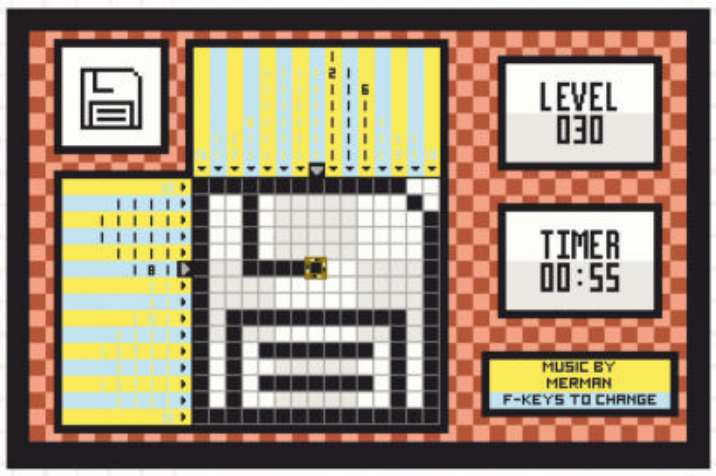
» [Amiga] It always pays for Aryn to destroy entire waves of enemies.

>> Score 90%



GRID PIX

» **PLATFORM:** COMMODORE 64 » **DL:** BIT.LY/32ZNXHB
» **DEVELOPER:** CARLETON HANDLEY
» **PRICE:** £6.99 (TAPE), £6.99 TO £13.99 (DISK), £TBA (CART)



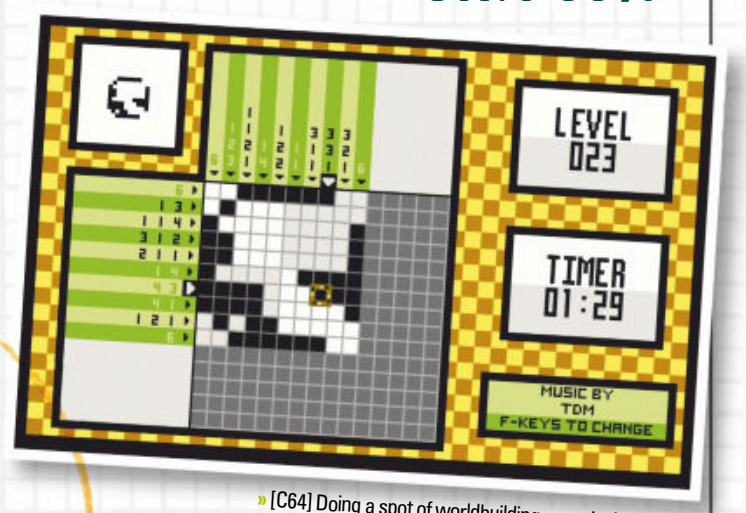
» [C64] It might be level 30 but this needs a 1581.

Nonogram puzzles (also known as Picross) hand the player a grid of cells and challenge them to recreate an image using a series of clues positioned on each row and column but, while this might seem simple, the challenges on offer from a good example of the genre can keep players busy for hours.

Over the years we've seen a few variations on this theme on a range of 8-bit systems, including one recently for the C64, but *Grid Pix* does stand out from the crowd. It's loaded with puzzles which might initially feel like an insurmountable challenge, but it doesn't serve up strict penalties for mistakes or taking too long so the experience is surprisingly relaxed and progress can be saved should the player feel the need for a break.

So this a more sedate puzzler, then. One that's ideal when you want to sit back after a long day at work and kick back with some relaxing brain-teasers.

» Score **88%**



» [C64] Doing a spot of worldbuilding, one pixel at a time.

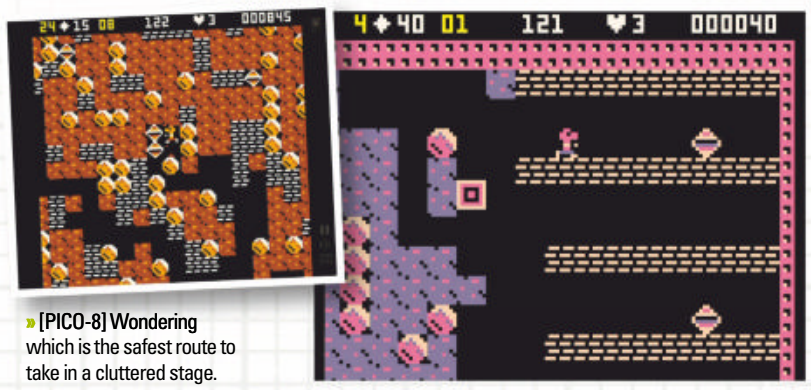
BOULDER RUN

» **PLATFORM:** PICO-8 » **DEVELOPER:** PAUL HAMMOND
» **PRICE:** FREE » **DOWNLOAD:** KIKSTART.ME.UK/BOULDER-RUN-PICO8

There's diamonds in them there hills, huge ones the height of a man just there to be gathered up by anybody brave enough to go searching. Each stage has a quota of diamonds to collect – sometimes there are extras which can be grabbed for more points – but there are boulders everywhere which will fall and potentially crush whatever is below them should the surrounding earth be disturbed. This does come in handy for dealing with roaming fireflies, amoebas or butterflies, and in some cases dropping a rock on their heads is actually a necessity.

Boulder Run is a love letter to First Star's classic *Boulder Dash* – specifically the C64 version – right down to the reworked in-game graphics. The levels have similarly been recreated and, because any cave and difficulty level can be from the main menu, more experienced spelunkers can make things tougher for themselves.

» Score **80%**



» [PICO-8] Wondering which is the safest route to take in a cluttered stage.

ROUNDUP

After the release of *Bruce Lee 2* on the Commodore 64 there's been a flurry of discussions over at Atari Age as programmers look into producing similar enhancements for their platform of choice. One of these projects is called *Eel Ecurb* and is, if the name didn't give things away, the original *Bruce Lee* but backwards. It has issues at the time of writing, but Kikstart.me.uk/eel-ecurb-a8 goes to the announcement in that larger Bruce-themed thread.

We don't often look at ROM hacks but *Pac-Man Plus 320* is an enhancement on the dot-eating Atari 7800 cartridge which, amongst other things, changes all of the graphics out to get a higher resolution. It has a few masking problems right now, but the Atari Age thread with a download is at Kikstart.me.uk/pac-320-7800.

FOREIGN FRUGGLERS

» **PLATFORM:** PC » **DEVELOPER:** ULTIMO GAMES » **DOWNLOAD:** KIKSTART.ME.UK/FRUGGLERS-STEAM » **PRICE:** £2.89

The end of the world is nigh, but four plucky and surprisingly well-armed survivors have a few thoughts they would like to share with the invaders. Our heroes stand at the bottom of the playfield shooting upwards and must dodge, shoot or occasionally leap over incoming hazards.

There are several weapons to collect which are thrown into the play area, and each has pros and cons. Some take longer to reload while others do more damage but have a limited range, so there's something for every playing style. Usefully, if a survivor dies their replacement can pick up the dropped gun and continue using it.

Inspiration has obviously been taken from a certain Taito coin-op, but the gameplay has been enhanced and presented in a nice, retro-themed wrapper. Saving the world isn't easy, but grabbing a favourite weapon and mashing invaders is fun, and some extra play modes are on their way.

» Score **82%**

» [PC] Goodness, here comes a very large and angry-looking invader.

COLLECTOR'S CORNER

READERS TAKE US THROUGH **THE RETRO KEYHOLE**

SEALED MEGA DRIVE AND MENACER

"I found an auction up in Newcastle where a collection of brand-new videogames was going under the hammer. I hadn't seen boxes (let alone contents) in such pristine condition since the Nineties."

PAID: £275

BIO

NAME:
Peter Leigh

FAVOURITE GAME:
Chase HQ (Arcade)

FAVOURITE CONSOLE:
Sega Master System/ ZX Spectrum

LOCATION:
Norwich

ESTIMATED VALUE:
Priceless

TWITTER:
@nostalnerd

NERD IS THE WORD

The Nostalgia Nerd takes us inside his collection

There can be little doubt that YouTube has played a huge part in rekindling the general interest in retro gaming, catapulting the formerly-niche pastime into the mainstream. This month's collector, Peter Leigh, otherwise known as Nostalgia Nerd, uploaded his first video to the website in June 2014, and today continues to create popular stories based around retro systems and game series. "My staple is the '*System Stories*' where I delve into the deepest and darkest history of consoles and computers gone by," reveals Peter. With some of these videos stretching to two hours, Peter produces miscellaneous stories in between, often simply focusing on hardware and software that has intrigued him over the years.

As a result, he's acquired a somewhat eclectic collection, taking in old favourites and oddities from history. "I tend to collect for my viewers – it's not really a selfish expedition, or so I tell myself," explains Peter. "For every item I purchase, I weigh up whether it will make suitable or interesting viewing material. If it doesn't fit that category, then I can't justify it." So sitting next to a brace of Amstrad Mega PCs, there's a complete set of big box *Descent* games, various retro-themed merchandise and rare computers such as an Apple III and Atari Falcon. "I think [YouTube] has massively contributed to the current retro revival we're experiencing," says Peter. I remember watching guys like Lazy Game Reviews back in 2011 and being riveted with the subject matter. I guess that's what really kicked off my collecting and pushed me back into this crazy world of nostalgia."

Like many of us, Peter's favourite systems are the ones he grew up with, in his case the ZX Spectrum and Sega Master System. "My dad was a computer programmer in the Eighties, so getting a home computer was only natural," he enthuses. "I remember first seeing the astronaut in *Jetpac*, flying around the screen, under my complete control, and I was hooked. Even when the newer machines arrived, there was something about the limitations and garish palette of the ZX Spectrum that kept me enthralled." The exception was the Master System, with the thrill of an instant *Alex Kidd* trumping the Sinclair computer's slow loading times. Sadly, also in tune with many fellow gamers, little of Peter's original collection survives – in his hands, anyway. "I parted with so many possessions at car boot sales, mainly so I could buy the latest games or gear," he laments. "Thankfully I did stash a few bits and bobs in my parents' loft, including my Atari 520STFM and a crap load of floppy disks for various systems. Going through these and discovering images or programs I had long-forgotten is fantastic, so I made it into a video series which I need to resume."

Today, Peter's channel is successful enough that it allows him to work on it full-time. "I can't think of a better thing to be spending my time on – just having

DOUBLE DRAGON FIGURES

"*Double Dragon* was one of my favourite games growing up, and to have something related to it in physical form is hugely compelling."

PAID: £30

Got an impressive collection of your own? Contact us at:

RetroGamerUK @RetroGamer_Mag retrogamer@futurenet.com

AMSTRAD MEGA PC WITH MONITOR

"I'd wanted one for years. It felt like combining my two passions of console gaming and PC tinkering into one delightfully concise experience."

AMOUNT PAID: £0 (DONATED BY A VIEWER)

APPLE III

"Rarer than hen's teeth. I actually visited someone in Essex who was selling some old Apricot computers and while up in his loft he said, 'Do you want this as well?' I snapped it up for a very good price.

PAID: £20

the opportunity to unleash my creative energy into these exciting memories of the past is what I live for," he says. With all of his videos studiously researched from magazines and the internet, there are few better places to start should you wish to learn about some of the more obscure gaming systems out there, all culled from his own acquisitions. With this collection now residing inside a studio space that Peter shares with fellow YouTubers Stuart Ashen and Did You Know Gaming, the future of retro curation looks to be in good hands.

Peter's YouTube channel is 'nostalgianerdvideos' and there is even more content and fun over on his website, nostalgianerd.com.

JEWEL IN THE CROWN

ATARI FALCON

"It's incredible for me because a fan of the channel sent it to me, fully boxed, upgraded and including a video capture card. I'd wanted to make a documentary on the Falcon for a long time, so it was great to be able to do that."

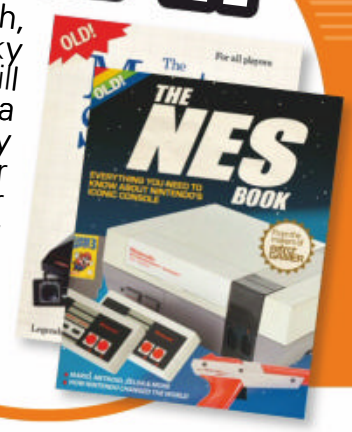
PAID: £0 (DONATED BY A FAN OF THE CHANNEL)

MAILBAG

HAVE YOUR SAY... SEND US A LETTER OR MAKE YOURSELF HEARD ON THE ONLINE FORUM – **WWW.RETROGAMER.NET**

WIN!

Every month, one lucky writer-in will receive a spanking copy of either our NES/Master System or SNES/Mega Drive books



STAR LETTER

POWER-UP

Dear **Retro Gamer**,
I know this praise is a little late (thank falling off a ladder and several weeks in hospital for that!) but I really enjoyed the recent article on *Amiga Power* magazine.

This was, for a time, one of my favourites and I really enjoyed the letter pages, to which I contributed many times. Although I did not become a 'minor celebrity', I did receive rebukes on a couple of occasions, for the *AP* team was incredibly and notoriously vicious to its loyal letter-writing readership.

It was nice to see what the *AP* staff are doing nowadays after the magazine's five-year stint, but I vividly remember buying the final issue and thinking, 'Oh my, how the mighty fall.'
D O'Conner

We always look forward to your letters and wondered why we haven't received any for a while, and now we know. We hope that you're fully recovered and we will get a book in the post to you.

» We're glad lots of people enjoyed the *Amiga Power* feature. Another classic magazine will be covered next issue.

» [Xbox] Gabriele has made us really interested in revisiting Conan's videogame past.

CRAVING CONAN

Dear **Retro Gamer**,
Have you ever covered any *Conan The Barbarian* licensed games in the past? I'm taking a stroll through the Hyborian Age in the Amiga classic, and I was thinking it would be fantastic to see some fur and blades on the best magazine in the world.
Gabriele Cerruto Costa

Thanks for getting in touch, Gabriele. We've not covered the series at all in the magazine, so it's certainly something we can consider for a future issue.

» [PS4] Games like *Red Dead Redemption II* will make you wish for the loading times of old. At least for the first install.

A LOAD TIME COMING

Dear Darran,
In these times of instant gaming, one thing we tend to forget is how we once were made to wait for our games, literally. I remember my trusty Commodore 64, and watching the tape counter crawl forever upwards, often for several minutes, before a game loaded and could be played.

Perhaps there is something amiss nowadays with new technology when everything is so fast. During the 8-bit days maybe we appreciated our games more due to the simple fact that we were made to wait for them to load before we could play?

Yet even this could be fun in its own way! Most had nice loading screens and music to match, others even allowed us to play *Space Invaders* while we idled away the time before the main event.

Compilations, for instance, were also fun. With several games per side on a tape, I first loaded each one in order and wrote their start counter times on a piece of paper which I kept with the compilation so I knew, when I wished to play a particular game later, how far to fast forward the tape in order to load it.

No doubt this will seem monotonous to the younger generation, but for those of us who lived through it, it was just a sign of the times. If anything, the 8-bit games taught us the art of patience!
Yours sincerely,
Stuart Hardy

Darran always used to make a sandwich and a cup of tea while he waited for a game to load on his Amstrad, so it's something we remember too. Having said that, Nick had to wait 30 minutes for our Xbox to update, and patches and installs can take an age to upload nowadays. The more things change the more they stay the same.

WHAT'S THIS THEN?

Can somebody help me as I think I am losing my mind!

In the late Nineties, maybe early Noughties, I remember playing a two-player lightgun game in the arcades with a friend of mine. The basic gist of the game was that you played two hitmen who didn't want to work for the boss anymore. The boss was at the top of this massive tower block, and told the guys they could leave but they had to fight off other hitmen on their way down (a bit like the movie *The Raid*).

If I remember right, the game had a *Viewtiful Joe* look to it (it was very colourful!). I've checked lots of online forums and apart from the usual *Time Crisis* no one knows what it was called. I seem to think it was something like *Killer 7* or *Super 6* but I'm not sure. It's bugging me as I'd like to see if there are any ports of it. Any ideas? Thanks in advance.
Mark Lyall

Sorry Mark, but you've got us absolutely stumped. Nick seems

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Email: retrogamer@futurenet.com

» [PS3] We've no idea what game Mark is on about, but he's adamant it's not a *Time Crisis* game.

Thanks again for the continued quality of your excellent magazine.
Geoff Owen

Glad to hear you enjoy the magazine, Geoff. Unfortunately, there's no current way for digital subscribers to gain access to the CDs etc. If this changes in the future we'll let everyone know.

to think it might be *Golgo 13* as it has the sort of aesthetic you're on about, but it only appears to be a single-player game. Can any of our readers help?

DIGITAL BLUES

Hi there,
I've been a long-time fan of your magazine, and have been buying it all the way since issue two – I was even a fan when the magazine came with the cover-mounted game discs.

However, since issue 114 I have switched my format to digital editions using the Google Play Newsstand. As a result, I have missed out on a couple of the cover-mounted gifts (the CDs, I believe). I fully understand that this is a sacrifice of buying the magazine digitally, but is there a way of getting the cover-mounted gifts through yourselves?

RUNNING THE GAUNTLET

Hi Darran,
My husband has recently completed a *Gauntlet* cabinet from scratch in just over a year. He has a YouTube channel and has gained a lot of support and followers for this project. We would love for his story to be featured in **Retro Gamer** magazine (which he also loves).
Nicola Wilmott

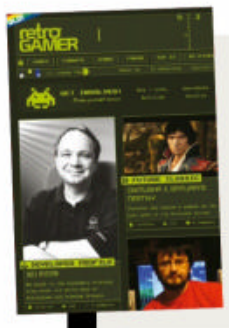
Well Nicola you've written in to the right place. That's an impressive piece of work, and it was really interesting to see how it's been constructed; it's clearly a labour of love. Anyone interested in Andy's work can find it by firing up YouTube and searching for Andy's Arcade.

» Here is Andy, proudly standing next to his completed arcade cabinet.

DISCUSSED THIS MONTH

Behind The Scenes

If you hadn't noticed, we tend to cover games that have been and gone, and that doesn't give us much opportunity to see anything new that developers are cooking up. So it was a nice and exciting change of pace this month when we were treated to a hands-on look at not one, but *two* upcoming products: the Mega Drive Mini and Capcom Home Arcade.



Your say

Every month, Retro Gamer asks a question on social media and prints the best replies. This month we wanted to know…

What's the first game you will play on the Mega Drive Mini?

» [Mega Drive Mini] We've been quite taken with the brand-new *Darius* release.

@JetArtois
Golden Axe. Me and my best mate played the hell outta that game. We both fancied Tyris Flare, both wanted a body like Ax Battler and called Gilius Thunderhead 'Mr Hudson' after our history teacher who had a beard.

Massimo Scarpato
Strider... so many memories!

@vanbillegem
Mortal Kombat because it had the red blood, contrary to the Super Nintendo version.

Kiwimike
A great line-up. From memory I think what jumped out for me was *Road Rash II* – just a really fun game. I'd want a few lightgun games before sinking my teeth into one I'd stay on for a while!

Graham Plowman
Castlevania: Bloodlines. The Mega Drive got a superb exclusive *Castlevania* game that any fan of the series should play if they missed it. Great to see it on there.

Simon Kalje
Road Rash II is where my sibling rivalry with my twin brother could be taken to the open road using whips and chains instead of at the dinner table with forks and spoons.

Big Shoes
For me it will be *Castlevania*, I have always wanted to play that version and this will be the perfect opportunity.

@AGDDavies
I'm getting the Asian version specifically to play *Alien Soldier*, so almost definitely that.

@clarkee79
I'll be straight onto *Streets Of Rage II*. Just the nostalgia of hearing the music again would be enough for me.

@bokilele
World Of Illusion. I played that game with my sister every day. Now we're 30 years old and still play it occasionally!

Plivier Braillon
Tetris, out of curiosity because I'm really curious to see what's different in this version of a game that's been remade hundreds of times!

@bitnacht
Ecco The Dolphin. My younger sister used to play it a lot.

Ashley Beeching
Contra: Hard Corps, as I never picked it up on its original release and my allegiance had passed on to the Atari Jaguar by that point!

retro GAMER

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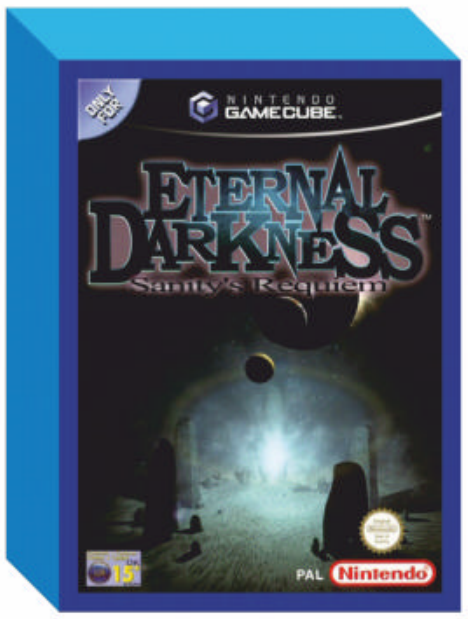
ENDGAME



ETERNAL DARKNESS: SANITY'S REQUIEM

For some reason, we've really been drawn to Silicon Knights' cult horror hit in recent times. We can't think why – it's not as if it's a game that's easy to relate to, given that it concerns people trying to stay sane as they battle to prevent seemingly inevitable doom being inflicted upon us by powerful beings. Let's skip to the end, and see how this entirely fictional scenario plays out

01

» Although he looks to be on the verge of defeat, Pious Augustus warns that the threat we face is much larger than him. The Darkness (no, not the comedy rockers) is larger than him, and efforts to repel it are futile.

02

» Our protagonist Alex Roivas listens, but with doubts in her mind and a weapon in her hands. She's been through an incredible ordeal to get to this point, and she really can't imagine anything worse than Augustus' reign of terror.

03

» Perhaps resigned to his fate, the undead centurion issues a final warning. He may perish, but that won't save us. Should he finally be put to death, our troubles will not cease but rather begin anew, with greater intensity.

04

» Alex has heard enough. She stabs at the heart of the villain, bringing about his undoing. But while Augustus was evil, he was no liar. Alex experiences a vision beyond reality, a vision of an eldritch abomination and its army of the dead, ready and waiting to deliver death and destruction.

05

» Only as she is too late to reverse course does Alex realise the gravity of her mistake. The destruction of Augustus has created a power vacuum, which has immediately been filled by a being whose capricious destructiveness vastly exceeds his own. Imminent doom awaits us all. Good job, hero.

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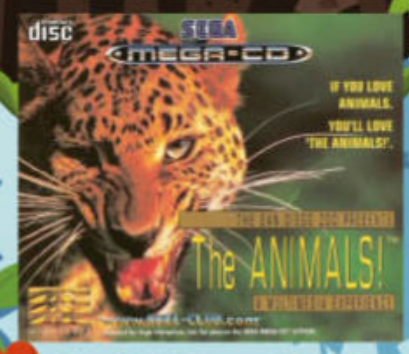

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